

# MDX-C800REC

## SERVICE MANUAL

US Model  
Canadian Model



|                                    |             |
|------------------------------------|-------------|
| Model Name Using Similar Mechanism | NEW         |
| Mini Disc Mechanism Type           | MG-715B-160 |
| Optical Pick-up Name               | KMS-263A    |

### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS

##### POWER OUTPUT AND TOTAL HARMONIC DISTORTION

19 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

#### Other Specifications

##### MD recoder section

|                       |                        |
|-----------------------|------------------------|
| Signal-to-noise ratio | 92 dB                  |
| Frequency response    | 10 – 20,000 Hz         |
| Wow and flutter       | Below measurable limit |

##### Laser Diode Properties

|                    |                 |
|--------------------|-----------------|
| Material           | GaAlAs          |
| Wavelength         | 790 nm          |
| Emission Duration  | Continuous      |
| Laser output power | Less than 5 mW* |

\* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

##### Tuner section

###### FM

|                              |                                 |
|------------------------------|---------------------------------|
| Tuning range                 | 87.5 – 107.9 MHz                |
| Antenna terminal             | External antenna connector      |
| Intermediate frequency       | 10.7 MHz/450 kHz                |
| Usable sensitivity           | 8 dBf                           |
| Selectivity                  | 75 dB at 400 kHz                |
| Signal-to-noise ratio        | 66 dB (stereo),<br>72 dB (mono) |
| Harmonic distortion at 1 kHz | 0.6% (stereo),<br>0.3% (mono)   |
| Separation                   | 35 dB at 1 kHz                  |
| Frequency response           | 30 – 15,000 Hz                  |

###### AM

|                        |                            |
|------------------------|----------------------------|
| Tuning range           | 530 – 1,710 kHz            |
| Antenna terminal       | External antenna connector |
| Intermediate frequency | 10.7 MHz/450 kHz           |
| Sensitivity            | 30 $\mu$ V                 |

##### Power amplifier section

|                      |   |
|----------------------|---|
| Outputs              | Speaker outputs<br>(sure seal connectors) |
| Speaker impedance    | 4 – 8 ohms                                |
| Maximum power output | 45 W $\times$ 4 (at 4 ohms)               |

#### General

|                      |  |
|----------------------|--|
| Outputs              | Audio outputs<br>Power antenna relay<br>control lead<br>Power amplifier control<br>lead                              |
| Inputs               | Telephone ATT control<br>lead<br>Digital input connector<br>BUS audio input connector<br>BUS control input connector |
| Tone controls        | Bass $\pm$ 9 dB at 100 Hz<br>Treble $\pm$ 9 dB at 10 kHz   |
| Power requirements   | 12 V DC car battery<br>(negative ground)   |
| Dimensions           | Approx. 178 $\times$ 50 $\times$ 184 mm<br>(7 1/8 $\times$ 2 $\times$ 7 1/4 in.)<br>(w/h/d)                          |
| Mounting dimensions  | Approx. 182 $\times$ 53 $\times$ 163 mm<br>(7 1/4 $\times$ 2 1/8 $\times$ 6 1/2 in.)<br>(w/h/d)                      |
| Mass                 | Approx. 1.5 kg (3 lb. 1 oz.)   |
| Supplied accessories | Parts for installation and<br>connections (1 set)<br>Front panel case (1)  |

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*Design and specifications are subject to change without  
notice.*

## FM/AM MINI DISC RECORDER

# SONY®



## SERVICE NOTE

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

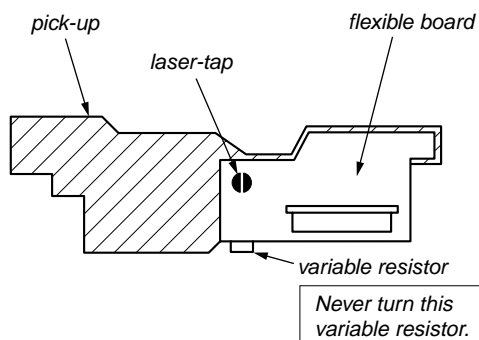
The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

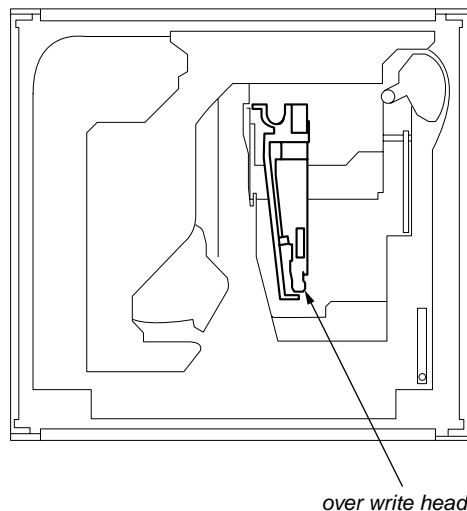
### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-263A)

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform measures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



## HANDLING PRECAUTION FOR THE OVER WRITE HEAD

The over write head is susceptible to damage. When adjusting and checking the over write head, it requires careful handling.



## SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  $\triangle$  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.



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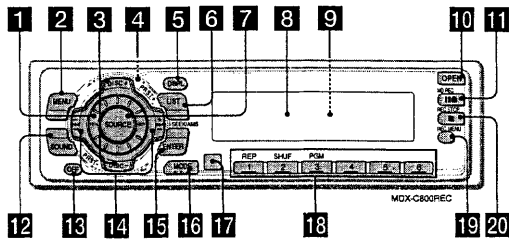
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# SECTION 1 GENERAL

This section is extracted from instruction manual.

## Location of controls



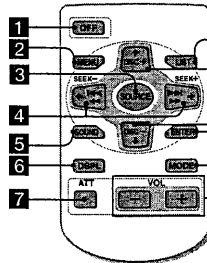
Refer to the pages listed for details.

- 1 Volume control dial
- 2 MENU button 9, 11, 13, 14, 15, 16, 23, 24, 25, 26, 27, 28, 29, 30, 31, 35, 36, 37, 39
- 3 DISC/PRST +/- (cursor up/down) buttons 9, 11, 13, 14, 15, 16, 17, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 35, 36, 37, 39  
During CD/MD playback:  
Disc change 12, 19  
During radio reception:  
Preset stations select 30
- 4 ▲ (eject) button (located on the front side of the unit behind the front panel) 10, 11
- 5 DSPL (display mode change) button 11, 16, 22, 27
- 6 LIST button 16, 31  
List-up 17, 32, 38
- 7 SOURCE (Radio/CD/MD/TV) button 7, 9, 10, 11, 13, 16, 29, 30, 36, 37, 39
- 8 Display window
- 9 Reset button (located on the front side of the unit behind the front panel) 8
- 10 OPEN button 8, 10, 11, 18, 19, 20, 21, 40
- 11 MD REC button 17, 18, 19, 20, 21
- 12 SOUND button 34
- 13 OFF button\* 6, 8, 9, 11
- 14 SEEK/AMS +/- (cursor left/right) buttons 9, 11, 13, 14, 16, 23, 24, 25, 26, 27, 28, 30, 31, 34, 35, 36, 39  
Automatic Music Sensor 12, 18, 19  
Manual Search 12  
Seek 29, 30, 37
- 15 ENTER button 9, 11, 13, 14, 15, 16, 17, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 35, 36, 37, 39
- 16 MODE button  
During CD or MD playback:  
CD/MD unit select 11, 16  
During radio reception:  
Band select 29, 30  
During TV reception:  
Unit select 36
- 17 Receptor for the card remote commander
- 18 Number buttons  
During radio reception:  
Preset number select 29, 30  
During CD/MD playback:  
① REP 12, 22  
② SHUF 13, 22  
③ PGM 14  
During TV reception:  
Preset number select 37
- 19 REC MENU button 18, 19, 20, 21, 22
- 20 REC STOP button 18, 20, 21

\* Warning when installing in a car without ACC (accessory) position on the ignition switch  
Be sure to press **OFF** on the unit for 2 seconds to turn off the clock display after turning off the ignition.  
When you press **OFF** only momentarily, the clock display does not turn off and this causes battery drain.

## Location of controls

### Card remote commander RM-X91 (optional)



The corresponding buttons of the card remote commander control the same functions as those on this unit.

- 1 OFF button
- 2 MENU button
- 3 SOURCE button
- 4 SEEK/AMS (+/-) buttons
- 5 SOUND button
- 6 DSPL button
- 7 ATT button
- 8 LIST button
- 9 DISC/PRST (+/-) buttons
- 10 ENTER button
- 11 MODE button
- 12 VOL buttons

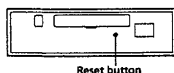
### Notes

- A unit turned off by pressing **OFF** for 2 seconds cannot be operated with the card remote commander unless **SOURCE** on the unit is pressed, or a disc is inserted to activate the unit first.
- Do not leave the card remote commander where it can be exposed to direct sunlight such as on a dashboard or the steering wheel, etc. The card remote commander may be deformed by the heat.
- The MiniDisc recorder may not operate properly with the card remote commander in direct sunlight. In such a case, hold the card remote commander close to the unit's receptor.

## Getting Started

### Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.  
Remove the front panel and press the reset button with a pointed object, such as a ball-point pen.

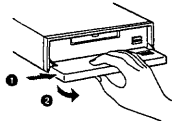


**Note**  
Pressing the reset button will erase the clock setting and some stored contents such as the station memo.

### Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

- 1 Press **OFF**.
- 2 Press **OPEN**, then slide the front panel to the right side, and pull out the left side of the front panel.

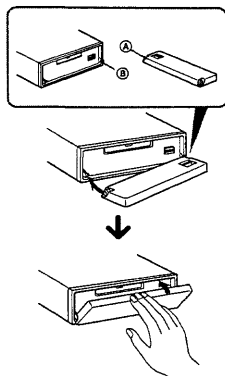


**Notes**

- Do not put anything on the inner surface of the front panel.
- Be sure not to drop the panel when detaching it from the unit.
- If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.
- When carrying the front panel with you, use the supplied front panel case.

### Attaching the front panel

Place the hole (A) in the front panel onto the spindle (B) on the unit as illustrated, then push the left side in.



**Notes**

- Be careful not to attach the front panel upside down.
- Do not press the front panel too hard against the unit when attaching it.
- Do not press too hard or put excessive pressure on the display window of the front panel.
- Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.

### Caution alarm

If you turn the ignition switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds.

## Turning the unit on/off

### Turning on the unit

Press **SOURCE** or insert an MD into the unit. For details on operation, refer to page 10 (MD/CD) and page 29 (radio).

### Turning off the unit

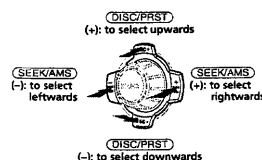
Press **OFF** to stop MD/CD playback or FM/AM reception (the key illumination and display remain on).  
Press **OFF** for 2 seconds to completely turn off the unit.

**Note**  
If your car has no ACC position on the ignition switch, be sure to turn the unit off by pressing **OFF** for 2 seconds to avoid car battery drain.

## How to use the menu

### — An introductory guide

One operational feature of this unit is selecting functions/settings from a menu. After entering Menu mode, you move the cursor to select each item with the following buttons:



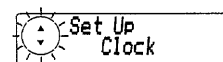
**Note**  
In Menu mode the "A" in the left of the display indicates the selectable buttons of **DISC/PRST** and **SEEK/AMS**.

## Setting the clock

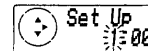
The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

- 1 Press **MENU**, then press either side of **DISC/PRST** repeatedly until "Clock" appears.

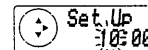


- 1 Press **ENTER**.

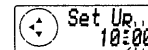


The hour indication flashes.

- 2 Press either side of **DISC/PRST** to set the hour.

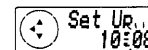


- 3 Press the (+) side of **SEEK/AMS**.

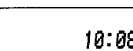


The minute indication flashes.

- 4 Press either side of **DISC/PRST** to set the minute.



- 2 Press **ENTER**.



The clock starts.

After the clock setting is completed, the display returns to normal play mode.



#### Notes

- If your car has no ACC (accessory) position on the ignition switch, be sure to turn on the unit before you set the clock (see page 9).
- In the initial setting, the clock indication appears while the unit is turned off. When D.INFO mode is set to ON, the time is always displayed (page 35).



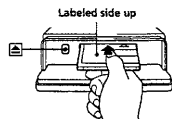
In addition to playing an MD with this unit alone, you can also control external CD/MD units.

**Note**  
If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear on the display when you play a CD TEXT disc.

## Playing a disc

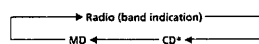
### Playing an MD (with this unit)

- 1 Press **(OPEN)** and insert the MD.



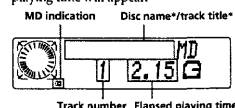
- 2 Close the front panel. Playback starts automatically.

If an MD is already inserted, press **(SOURCE)** repeatedly until "MD" appears to start playback.



\* If the corresponding optional equipment is not connected, this item will not appear.

The title of the MD\* and the track title\* will appear on the display window, then the playing time will appear.



\* Only if these titles are prerecorded on the MD (Some characters cannot be displayed).

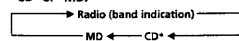
| To            | Press                         |
|---------------|-------------------------------|
| Stop playback | <b>(OFF)</b>                  |
| Eject the MD  | <b>(OPEN)</b> then <b>(▲)</b> |

#### Note

When the last track on the MD is over, the track number indication returns to "1," and playback restarts from the first track of the MD. With optional unit connected, the MD in MD unit 2 will be played from the beginning, after the MD in the main unit is played to the end.

### Playing a CD or MD (with optional CD/MD unit)

- 1 Press **(SOURCE)** repeatedly to select "CD\*" or "MD\*."



\* This item will not appear if the optional CD unit is not connected.

- 2 Press **(MODE)** until the desired unit appears. CD/MD playback starts.

### Changing the display item

Each time you press **(DISP)** during MD, CD, or CD TEXT disc playback, the item changes as follows:



- \*1 If you have not labeled the CD or CD TEXT disc ("Labeling a CD" on page 15), or if there is no disc name prerecorded on the MD, "NO D.Name" appears on the display.
- \*2 If you play a CD TEXT disc, the artist's name appears on the display after the disc name. (Only for CD TEXT discs with the artist's name.)
- \*3 If the track name of a CD TEXT disc or MD is not prerecorded, "NO T.Name" appears on the display.

After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds. In the Motion Display mode, all the items are scrolled on the display one by one in order.

#### Notes

- If you use personalized labels, they will always take priority over the original CD TEXT information when such information is displayed.
- Some letters cannot be displayed during MD or CD playback.

#### Tip

The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 35.)

### Automatically scrolling a disc name — Auto Scroll

If the disc name, artist name, or track name on an MD or a CD TEXT disc exceeds 10 characters and the Auto Scroll function is on, information automatically scrolls across the display as follows:

- The disc name appears when the disc has changed (if the disc name is selected as the display item).
- The track name appears when the track has changed (if the track name is selected as the display item).
- The disc or track name appears depending on the setting when you press **(SOURCE)** to select an MD or CD TEXT disc.

If you press **(DISP)** to change the display item, the disc or track name of the MD or CD TEXT disc is scrolled automatically whether you set the function on or off.

- 1 During playback, press **(MENU)**.
- 2 Press either side of **(DISCP/PRST)** repeatedly until "A.Scroll off" appears.
- 3 Press the **(+)** side of **(SEEK/AMS)** to select "A.Scroll on."
- 4 Press **(ENTER)**.

To cancel Auto Scroll, select "A.Scroll off" in step 3.

10

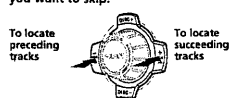
11

#### Note

For some CD TEXT discs with very many characters, the following cases may happen:  
— Some of the characters are not displayed.  
— The information does not scroll.

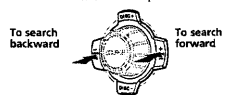
### Locating a specific track — Automatic Music Sensor (AMS)

During playback, press either side of **(SEEK/AMS)** momentarily for each track you want to skip.



### Locating a specific point in a track — Manual Search

During playback, press and hold either side of **(SEEK/AMS)**. Release when you have found the desired point.



#### Note

If "LL LL" or "RR RR" appears on the display, you have reached the beginning or the end of the disc and you cannot go any further.

### Locating a disc — Disc Selection

When an optional CD/MD unit is connected, press either side of **(DISCP/PRST)** to select the desired disc. The desired disc on the current optional CD/MD unit begins playback.

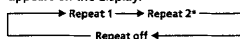
## Playing tracks repeatedly

### — Repeat Play

The MD in the main unit will automatically repeat itself when it reaches the end. As repeat play, you can select:

- Repeat 1 — to repeat a track.
- Repeat 2 — to repeat a disc in the optional CD/MD unit.

During playback, press **(REP)** repeatedly until the desired setting appears on the display.



\* "Repeat 2" is only available when you connect one or more optional MD units, or when you connect optional CD units.



Repeat Play starts.

To return to normal play mode, select "Repeat off."

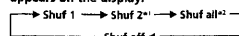
## Playing tracks in random order

### — Shuffle Play

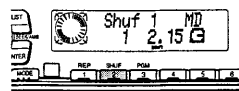
You can select:

- Shuf 1 — to play the tracks on the current disc in random order.
- Shuf 2 — to play the tracks in the current optional CD/MD unit in random order.
- Shuf all — to play all the tracks in all the connected CD/MD units (including this unit) in random order.

During playback, press **(SHUF)** repeatedly until the desired setting appears on the display.



\*1 "Shuf 2" is only available when you connect one or more optional CD/MD units.  
\*2 "Shuf all" is only available when you connect one or more optional MD units, or when you connect two or more optional CD units.



Shuffle Play starts.

To return to normal play mode, select "Shuf off."

## Creating a program

### — Program Memory

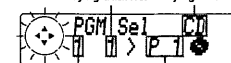
You can choose your favorite tracks from an MD/CD on the main and connected CD/MD units, and create your own program to play them in the order of your choice. The program will be stored in the unit's memory. You can select up to 24 tracks for a program and one program per each unit with this function.

- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISCP/PRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

#### Program edit mode

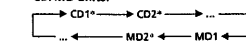
Playing track No. Playing unit



Playing disc No. Program No.

- 3 Select the track you want.

- 1 Press **(SOURCE)** repeatedly to select this unit ("MD" or "MD1") or optional CD/MD units.



\* If the corresponding optional equipment is not connected, these items will not appear.

- 2 Press either side of **(DISCP/PRST)** for more than 2 seconds until the desired disc appears.

- 3 Press either side of **(SEEK/AMS)** repeatedly to select the track.

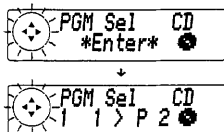
continue to next page →

12

13



- 4 Press **(ENTER)** momentarily.



The unit will repeat the same track during the program creating procedure.

- 5 To continue entering tracks, repeat steps 3 and 4.

- 6 When you finish entering tracks, press **(MENU)** twice.

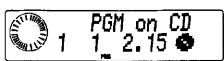
#### Notes

- **\*\*\*Wait\*\*\*** appears on the display while the unit is reading the data, or if a disc has not been inserted into the unit.
- **\*\*\*Mem FULL\*\*\*** appears on the display if you try to enter more than 24 tracks into a program.
- Repeat play and shuffle play will be suspended until Program Edit mode is over.

#### Playing the stored program

Changing the disc order on the CD/MD unit will not affect program memory play.

During CD/MD playback, press **(3)** (PGM) to play the stored program.  
PGM on → PGM off



To return to normal play mode, select "PGM off."

#### Notes

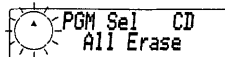
- **"NO Data"** appears on the display if no track is stored in the program.
- If a track stored in program memory is not on a disc in the magazine, the track will be skipped.
- If the disc in the magazine contains no tracks stored in program memory, or if the program information has not been loaded yet, **"Not Ready"** appears.

#### Erasing an entire program

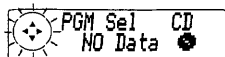
- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISCPRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

- 3 Press the (+) side of **(DISCPRST)** repeatedly until "All Erase" appears.



- 4 Press **(ENTER)** for 2 seconds.



The entire program is erased.

- 5 Press **(MENU)** twice.

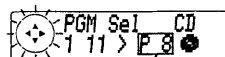
#### Adding tracks to the program

- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISCPRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

When adding a track to the end of a program, skip step 3.

- 3 Press either side of **(DISCPRST)** repeatedly to select the program number where you want to insert a new track.



Program No.

- 4 Press **(SEEK/AMS)** to select the new track.

- 5 Press **(ENTER)**.

The selected track is inserted at that program number, and the succeeding tracks are renumbered. To continue inserting tracks, repeat steps 3 to 5.

- 6 Press **(MENU)** twice.

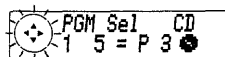
**Note**  
Once all 24 slots have been filled, **\*\*\*Mem FULL\*\*\*** appears on the display, and you cannot insert more tracks.

#### Erasing tracks in a program

- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISCPRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

- 3 Press either side of **(DISCPRST)** repeatedly to select the program with the track number you want to erase.



- 4 Press **(ENTER)** for 2 seconds.

The selected track is erased, and the succeeding tracks are renumbered.

- 5 Press **(MENU)** twice.

#### Labeling a CD — Disc Memo

(For a CD unit with the CUSTOM FILE function)

You can label each disc with a personalized name. You can enter up to 8 characters for a disc. If you label a CD, you can locate the disc by name (page 17).

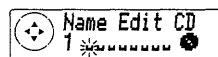
#### Caution

Do not use the CUSTOM FILE feature while driving, or perform any other function which could divert your attention from the road.

- 1 Start playing the disc you want to label.

- 2 Press **(MENU)**, then press either side of **(DISCPRST)** repeatedly until "Name Edit" appears.

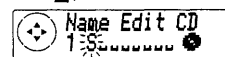
- 3 Press **(ENTER)**.  
Name Edit mode



The unit will repeat the disc during the labeling procedure.

- 4 Enter the characters.

Press the (+) side of **(DISCPRST)** repeatedly to select the desired characters.  
(A → B → C → ... Z → 0 → 1 → 2 → ... 9 → \* → - → + → / → \ → > → < → . → )



If you press the (-) side of **(DISCPRST)** repeatedly, the characters will appear in reverse order.  
If you want to put a blank space between characters, select " ".

continue to next page →

- 2 Press the (+) side of **(SEEK/AMS)** after locating the desired character.



If you press the (-) side of **(SEEK/AMS)**, you can move back to the left.

- 3 Repeat steps 1 and 2 to enter the entire name.

- 5 To return to normal CD play mode, press **(ENTER)**.

#### Tips

- To erase or correct a name, enter " " for each character.
- There is another way to start labeling a CD: Press **(LIST)** for 2 seconds instead of performing steps 2 and 3. You can also complete the operation by pressing **(DISP)** for 2 seconds instead of step 5.
- You can label CDs on a unit without the CUSTOM FILE function if that unit is connected along with a CD unit that has the function. The disc name will be stored in the memory of the CD unit with the CUSTOM FILE function.

#### Note

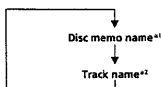
Repeat play, shuffle play, and program play will be suspended until Name Edit mode is over.

#### Displaying the disc memo

Press **(DISP)** during CD or CD TEXT disc playback.



Each time you press **(DISP)** during CD or CD TEXT disc playback, the item changes as follows:



\* If you use personalized labels, they will always take priority over the original CD TEXT information when such information is displayed.

\*\* If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear on the display when you play a CD TEXT disc.

**Note**  
Some letters cannot be displayed during MD or CD TEXT disc playback.

#### Erasing the disc memo

- 1 Press **(SOURCE)** repeatedly to select "CD."

- 2 Press **(MODE)** repeatedly to select the CD unit with the CUSTOM FILE function.

- 3 Press **(MENU)**, then press either side of **(DISCPRST)** repeatedly until "Name Del" appears.

- 4 Press **(ENTER)**.

- 5 Press either side of **(DISCPRST)** repeatedly to select the disc name you want to erase.  
The stored names will appear from the earliest ones entered.

- 6 Press **(ENTER)** for 2 seconds.

The name is erased.  
Repeat steps 5 and 6 if you want to erase other names.

- 7 Press **(MENU)** twice.

The unit returns to normal CD play mode.

- Notes**
- To erase the disc memo, play a CD on the CD unit in which the disc memo you want to erase is stored.
  - When a personalized label for a CD TEXT disc is erased, the original CD TEXT information will appear on the display.

#### Locating a disc by name

— List-up (For a CD unit with the CD TEXT function/CUSTOM FILE function or an MD unit)

You can use this function for discs that have been assigned custom names or for CD TEXT discs. You can locate the disc by:

- its custom name: when you assign a name for a CD or an MD using a CD unit with the CUSTOM FILE function or an MD unit. (For information on disc names, see "Labelling a CD" and "Labelling an MD" on pages 15 and 27).
- the CD TEXT information: when you play a CD TEXT disc on a CD unit with the CD TEXT function.

- 1 Press **(LIST)**.

The name assigned to the current disc appears on the display.



- 2 Press either side of **(DISCPRST)** repeatedly until you find the desired disc.

- 3 Press **(ENTER)** to play the disc.

#### Notes

- When using the card remote commander, press **(LIST)** to return to normal play mode. When operating just by the unit's button, the display returns to normal play mode after 5 seconds.
- The track names are not displayed during MD or CD TEXT disc playback.
- If there are no discs on the CD/MD unit, **"NO Disc"** appears on the display.
- If a disc has not been assigned a custom name, **"\*\*\*\*\*"** appears on the display.
- If you use personalized labels, they will always take priority over the original CD TEXT information when such information is displayed.
- Some letters cannot be displayed during MD or CD TEXT disc playback.
- If the disc information has not been read yet by the unit, **\*\*\*** is displayed.
- If an optional TV system is connected, the disc name appears on the display of the TV system but not on the unit's display.

#### Recording on an MD

You can record individual tracks/discs or programmed tracks played on a connected CD/MD unit onto the MD on this unit. You can also record a radio program with the "Time Machine recording" feature.

#### Notes on recording

- When the whole playback time of the CD/MD is longer than the remaining recordable time of the MD, recording will stop when the recordable MD becomes full.
- A recording may fail if there is too much difference in temperature between the unit and the MD.
- Recorded sound may drop out if you perform recording while the unit is subject to excessive vibration (such as when driving on a rough road, etc.).
- Once you finish recording on or editing the MD, be sure to eject the MD before you turn off the ignition or disconnect the power-supply leads of the unit.
- Recording is completed when the unit updates the TOC (Table of Contents) information and then the MD is ejected. The lamp located at the bottom of the MD slot flashes during updating of the TOC information.
- You cannot perform the following operations during recording or recording stand-by:
  - selecting another track\*
  - selecting another radio program\*
  - ejecting an MD
  - labelling an MD
  - selecting Menu mode.
- Unselectable only during recording
- "Protected" appears when the tab for record-protection is open.
- Repeat play, shuffle play, and program play will be canceled when **(Q/RES)** is pressed.

#### Tip

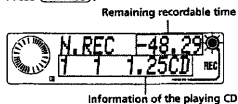
The unit automatically locates the end of the MD's recorded section and starts to record from that point.



## Recording from a CD or MD by the track

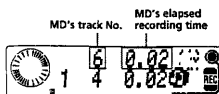
### — Track recording

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 10.)
- 2 Play the CD or MD from which you want to record.
- 3 Press **(MD REC)**.



The unit locates the beginning of the selected track and starts recording. Then "●" stops flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) light in red.

- 6 Press **(MD REC)** again to start recording.



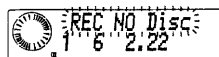
When the recording of the track is completed, the unit beeps and automatically stands by for further recording while the CD or MD continues to play.

To cancel the recording or recording stand-by, press **(REC STOP)**.

### Inserting the MD to record upon afterwards

You can still start recording even if a CD or MD in the connected CD/MD unit is already playing and an MD is yet to be inserted into this MD recorder.

- 1 Press **(MD REC)**.
- 2 Insert an MD while "REC NO Disc" is displayed (within 10 seconds after step 1).



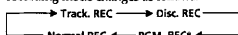
- 3 Press **(REC MENU)** repeatedly until "Track. REC" appears.

- 4 Press **(MD REC)** again to start recording.

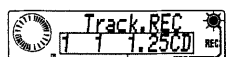
**Note**  
Be sure to insert an MD while "REC NO Disc" is displayed. If the indication disappears, recording stand-by is canceled.

The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) lit in amber.

- 4 Press **(REC MENU)** repeatedly until "Track. REC" appears.  
Each time you press **(REC MENU)**, recording mode changes as follows:



\* If you did not create a program, this item will not appear.



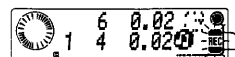
Information of the playing CD  
If you want the actual recording to start from the point on the track where you press **(MD REC)** next, select "Normal REC" in this step.

- 5 Press either side of **(SEEK/AMS)** repeatedly to select the track you want to record.

## Continuing recording after turning the ignition off

### — REC Continue mode

- 1 Press **(OPEN)** and insert the MD to be recorded on.
- 2 Play the CD or MD from which you want to record.
- 3 Press **(MD REC)**.
- 4 Press **(REC MENU)** repeatedly to select "Disc. REC," "Track. REC," or "PGM. REC."
- 5 Press **(MD REC)** again to start recording.
- 6 Press **(REC MENU)** repeatedly until "Continue on" appears.



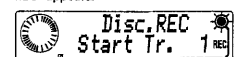
Recording continue indication

- 7 Turn the ignition off and detach the front panel before you leave the car.  
During REC Continue mode, the unit keeps beeping to indicate the state of the unit, and stops beeping when recording is completed. When you turn the ignition to the ACC position and attach the front panel again, "REC Complete" appears on the display if recording is completed successfully.

**Notes**  
• Frequent use of REC Continue mode feature may cause battery drain. Make sure that the battery is well charged.  
• Be sure not to start the engine of the car again during REC Continue mode. Recording may fail.  
• When an optional TV/video unit is connected, the monitor stays on during Timer-off recording or REC Continue mode. Turn the monitor off before leaving the car to reduce the likelihood of battery drain or theft.

## Recording a whole CD or MD — Disc recording

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 10.)
- 2 Play the CD or MD from which you want to record.
- 3 Press **(MD REC)**.  
The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) lit in amber.
- 4 Press **(REC MENU)** repeatedly until "Disc. REC" appears.



- 5 Press either side of **(DISC/PRST)** repeatedly to select the disc from which you want to record.

- 6 Press either side of **(SEEK/AMS)** repeatedly to select the track from which you want to start recording.  
If you want to record the whole disc, be sure to choose the first track.

- 7 Press **(MD REC)** again to start recording.  
The recording starts from the beginning of the currently playing track. Then "●" stops flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) light in red.

continue to next page →

When the recording of all the following tracks are over, the unit beeps and automatically stands by for further recording while the CD or MD continues to play.

To cancel the recording or recording stand-by, press **(REC STOP)**.

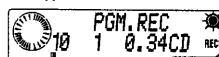
**Tip**  
You can continue recording even after turning off the ignition to leave the car (see "Continuing recording after turning the ignition off" on page 19).

## Recording from a CD or MD in a specific track order — Program recording

You must have a program created to use this function. (See "Creating a program" on page 13.)

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 10.)
- 2 Press **(MD REC)**.  
The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) lit in amber.

- 3 Press **(REC MENU)** repeatedly until "PGM. REC" appears.



- 4 Press **(MD REC)** again to start recording.  
The unit locates the beginning of the selected program and starts recording. Then "●" stops flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) light in red.

When the recording of the program is completed, the unit beeps and automatically stands by for further recording while the CD or MD continues to play.

To cancel the recording or recording stand-by, press **(REC STOP)**.

**Notes**  
• If you did not create a program, "PGM. REC" will not appear in step 3.  
• If you created a program that includes the MD to play on this recorder, "Not Ready" appears in step 3. In such a case, you must erase such tracks from the program.

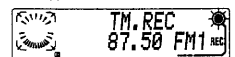
**Tip**  
You can continue the recording even after turning off the ignition to leave the car (see "Continuing recording after turning the ignition off" on page 19).

## Recording a radio program

### — Time Machine recording

When recording from a radio broadcast, the first few seconds of material are often lost because of the time it takes you to ascertain the contents and press the buttons. To prevent this loss of material, the "Time Machine recording" feature constantly stores a maximum of 10 seconds of the most recent audio data in buffer memory. When you start recording a radio program, the recording actually starts with the 10 seconds of audio data stored in buffer memory in advance. You can also record without the prestored 10 seconds as well.

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 10.)
- 2 Tune in the desired station (page 30).
- 3 Press **(MD REC)**.  
The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) lit in amber.
- 4 Press **(REC MENU)** repeatedly until "TM. REC" appears.



If you want actual recording to start from the point on the program where you press **(MD REC)** next, select "Normal REC" in this step.

- 5 Press **(MD REC)** again to start recording.  
The unit starts recording with the 10 seconds of audio data stored in advance in buffer memory. Then "●" stops flashing and the buttons for recording (**(MD REC)**), (**(REC STOP)**), and (**(REC MENU)**) light in red.

To pause the recording, press **(MD REC)**.

To cancel the recording or recording stand-by, press **(REC STOP)**.

**Notes**  
• If you pause radio recording, a track number is recorded at that point.  
• You cannot tune in another station during recording. Pause recording before attempting to tune in another station.

### Using a timer to stop recording

#### — Timer-off recording

You can set a timer so the unit will continue recording the radio program after you turn off the ignition and leave the car.

- 1 Press **(OPEN)** and insert the MD to be recorded on.
- 2 Tune in the desired station (page 30).
- 3 Press **(MD REC)**.
- 4 Press **(MD REC)** again to start recording.

continue to next page →



- 5 Press **(REC/MENU)** repeatedly until your desired recording time appears. Each time you press **(REC/MENU)**, recording time increases, in increments of 10 minutes.

→ 10 → 20 → ... → 80 → off

During Timer-off recording, the unit keeps beeping to indicate the state of the unit and stops beeping when the recording is completed. When you turn the ignition to the ACC position and attach the front panel again, "REC Complete!" appears on the display if the recording is completed successfully.

#### Notes

- Be sure not to start the engine of your car again during Timer-off recording. Recording may fail.
- When an optional TV/Video unit is connected, the monitor stays on during Timer-off recording or REC Continue mode. Turn the monitor off before leaving the car to reduce the likelihood of battery drain or theft.
- Frequent use of the Timer-off recording feature may cause battery drain. Make sure that the battery is well charged.
- The power antenna remains extended during Timer-off recording. (The antenna retracts when the recording is over.)
- The sound of the radio will be recorded on the MD as you hear it during reception (including any noise, distortion, and missing sound).

#### Recording the audio sound of a TV program or video

You can record the audio sound of a TV program or video in the same manner as with a radio program. For selecting the source, see "Watching the TV" or "Watching a video" on page 36.

## Editing an MD

By using the editing functions described below, you can create your own original MD albums.

#### Caution

Do not edit the MD while driving, as it diverts your attention from the road.

#### Notes on editing

- "Protected" appears if the tab for record-protection is open.
- Once you finish editing an MD, be sure the MD is ejected before you turn the ignition off or disconnect the power-supply leads of the unit. Editing is completed when the unit updates the TOC (Table of Contents) information and ejects the MD. The lamp located at the bottom of the MD slot flashes during updating of the TOC information.
- The **(REP)**, **(SHUF)**, and **(CSP)** buttons do not work during edit mode.

## Erasing a recording

### — Erase function

You can erase a single track or all tracks at once. You can erase a portion of a track as well.

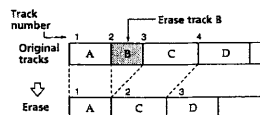
#### Note

You cannot restore an erased track. Be sure to confirm the selected track or tracks before erasing.

#### Erasing a single track

You can erase a track simply by specifying its track number. When you erase a track, the total number of tracks on the MD decreases by one, and all the tracks following the erased one are renumbered.

Example: Erasing track B.



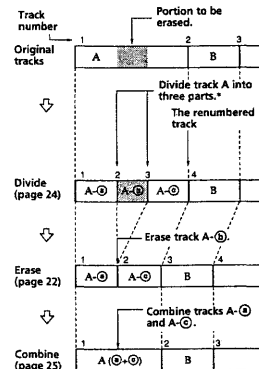
22

To cancel the erasing procedure altogether, press **(MENU)** twice anywhere before step 5.

#### Erasing a portion of a track

By using the Divide (see page 24), Erase (see page 22), and Combine (see page 25) functions, you can erase specific portions of a track.

Example: Erasing a portion of track A.



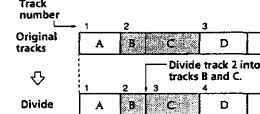
• The tracks are renumbered.

## Dividing recorded tracks

### — Divide function

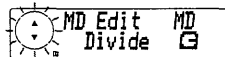
You can use this function to add track numbers to divide any multiple tracks that are recorded as one track. This function also lets you mark track numbers after recording ends. The total number of tracks increases by one, and all subsequent tracks are renumbered.

Example: Dividing track 2 into tracks B and C.



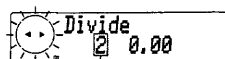
- 1 While playing an MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Divide" appears.



- 3 Press **(ENTER)**.

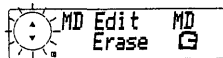
- 4 Press either side of **(SEEK/AMS)** repeatedly to select the track you want to divide.



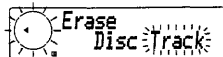
Selected track number

- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Erase" appears.



- 3 Press **(ENTER)**.



- 4 While "Track" is flashing, press **(ENTER)** to select track erase.

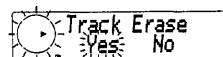
- 5 Select the track.  
Press either side of **(SEEK/AMS)** repeatedly to select the track.



Selected track No.

- Press **(ENTER)**.

- 6 Erase the track.  
Press the **(-)** side of **(SEEK/AMS)** to select "Yes."



To cancel selection of this track and return to step 5, select "No" in this step.

- Press **(ENTER)**.  
"Complete!" appears, and the selected track is erased.

- 7 To continue erasing tracks, repeat steps 5 and 6.

- 8 Press **(MENU)** twice.

To cancel the erasing procedure altogether, press **(MENU)** twice anywhere before step 6.

#### Erasing all tracks

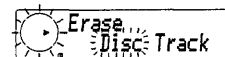
You can erase the disc name and all recorded tracks, and their titles all at once.

- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Erase" appears.

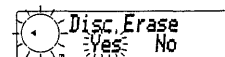
- 3 Press **(ENTER)**.

- 4 Select disc erase.  
Press the **(-)** side of **(SEEK/AMS)** to select "Disc."



- Press **(ENTER)**.

- 5 Erase all tracks.  
Press the **(-)** side of **(SEEK/AMS)** to select "Yes."



To cancel erasing, select "No" in this step.

- Press **(ENTER)**.  
"Complete!" appears, and all tracks are erased. The source changes to the next available source.

continue to next page →

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- 5 Press **(ENTER)** to mark the dividing point. The unit repeatedly plays the next few seconds after the marked point.



- 6 Press either side of **(SEEK/AMS)** to fine-tune the dividing point.

- 7 While monitoring the track, press **(ENTER)** at the point where you want to divide. "Complete!" appears, and the selected track is divided.

- 8 To continue dividing tracks, repeat steps 4 to 7.

- 9 Press **(MENU)** twice.

To cancel the dividing procedure altogether, press **(MENU)** twice anywhere before step 7.

#### Notes

- The name applied to the original track will become the label for the first new track of the divided track, and the second one will not be labeled.
- "Impossible" appears if the unit cannot divide a track any more because the MD has been edited too many times. This is due to the system limitation of MDs and is not a malfunction of the unit.

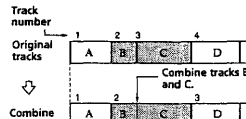
*Tip*  
To combine the divided tracks again, use the Combine function (see page 25).

## Combining recorded tracks

### — Combine function

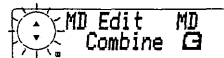
This function lets you put several tracks or several independently recorded portions together into a single track. The total number of tracks decreases by one, and all subsequent tracks are renumbered.

Example: Combining tracks B and C.



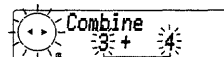
- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Combine" appears.



- 3 Press **(ENTER)**.

- 4 Press either side of **(SEEK/AMS)** repeatedly to select the set of tracks you want to combine.



Selected track Nos.

- 5 Press **(ENTER)** to combine the tracks. "Complete!" appears, and the selected tracks are combined.

- 6 To continue combining tracks, repeat steps 4 and 5.

- 7 Press **(MENU)** twice.

To cancel the combining procedure, press **(MENU)** twice anywhere before step 5.

#### Notes

- The name applied to the first of the original tracks will be labeled on the combined track.
- "Impossible" appears if the unit cannot combine the tracks because the MD has been edited too many times. This is due to the system limitation of MDs and is not a malfunction of the unit.

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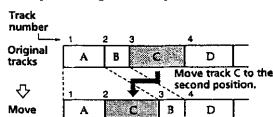


## Moving recorded tracks

### — Move function

Using the Move function, you can change the order of the tracks recorded on an MD. When you move tracks, the tracks are automatically renumbered.

Example: Moving track C to position 2.



1 While playing the MD you want to edit, press **(MENU)**.

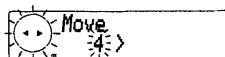
2 Press either side of **(DISCPRST)** repeatedly until "Move" appears.



3 Press **(ENTER)**.

4 Select the track you want to move.

① Press either side of **(SEEKAMS)** repeatedly to select the track.

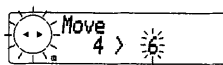


Selected track No.

② Press **(ENTER)**.

5 Select the track number to which you want to move the track.

① Press either side of **(SEEKAMS)** repeatedly to select the track number.



Selected new track No.

② Press **(ENTER)** to move the track. "Complete!" appears, and the selected track is moved.

6 To continue moving tracks, repeat steps 4 and 5.

7 Press **(MENU)** twice.

To cancel the moving procedure, press **(MENU)** twice anywhere before step 5.

## Labeling an MD

You can label your recorded MDs and tracks. You can enter up to 1,700 characters for labels per disc (disc title and track title included).

### Caution

Do not perform this procedure while driving, as it diverts your attention from the road.

### Note

The **(REP)** and **(SHUF)** buttons do not work during Name Edit mode.

### Labeling a track

1 While playing the MD you want to edit, press **(MENU)**.

2 Press either side of **(DISCPRST)** repeatedly until "Name Edit" appears.

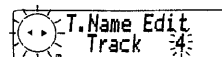


3 Press **(ENTER)**.



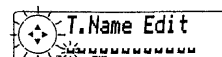
4 While "Track" is flashing, press **(ENTER)** to select track name edit.

5 Press either side of **(SEEKAMS)** repeatedly to select the track you want to label.



Selected track No.

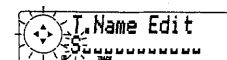
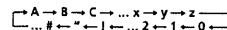
6 Press **(ENTER)**.



The unit will repeat the track during the labeling procedure.

7 Enter the characters.

① Press the (+) side of **(DISCPRST)** to select desired characters.



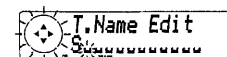
If you press the (-) side of **(DISCPRST)** repeatedly, the characters will appear in reverse order.

Each time you press **(DISP)**, the character type changes as follows:

A → a → 0 → A

If you want to put a blank space between characters, select " ".

② Press the (+) side of **(SEEKAMS)** after locating a desired character.



If you press the (-) side of **(SEEKAMS)**, you can move back to the left.

③ Repeat steps ① and ② to enter the entire title.

8 Press **(ENTER)**.

"Complete!" appears, and the selected title is registered.

9 Press **(MENU)** twice.

To cancel the labeling procedure, press **(MENU)** twice anywhere before step 8.

### Labeling an MD

After step 3, press the (-) side of **(SEEKAMS)** to select disc name edit, and go to step 6.



The unit will repeat the disc during the labeling procedure.

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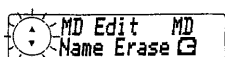
## Changing the label

Overwrite the desired track/disc name as described in "Labeling a track" and "Labeling an MD."

### Erasing a track name

1 While playing the MD you want to edit, press **(MENU)**.

2 Press either side of **(DISCPRST)** repeatedly until "Name Erase" appears.



3 Press **(ENTER)**.

4 While "Track" is flashing, press **(ENTER)** to select track name erase.



5 Select the track whose name you want to erase.

① Press either side of **(SEEKAMS)** repeatedly to select the track whose name you want to erase.

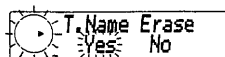


Selected track No.

② Press **(ENTER)**.

6 Erase the name.

① Press the (-) side of **(SEEKAMS)** to select "Yes."



To cancel selection of this track name and return to step 5, select "No" in this step.

② Press **(ENTER)**.

"Complete!" appears, and the selected track name is erased.

7 Repeat steps 4 to 6 to erase more track names.

8 Press **(MENU)** twice.

To cancel the erasing procedure altogether, press **(MENU)** twice anywhere before step 6.

### Note

Be sure to confirm the selected track number before erasing.

### Erasing a disc name

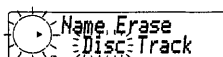
1 While playing the MD you want to edit, press **(MENU)**.

2 Press either side of **(DISCPRST)** repeatedly until "Name Erase" appears.

3 Press **(ENTER)**.

4 Select disc name erase.

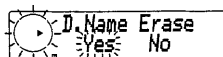
① Press the (-) side of **(SEEKAMS)** to select "Disc."



② Press **(ENTER)**.

5 Erase the disc name.

① Press the (-) side of **(SEEKAMS)** to select "Yes."



To cancel the erasing procedure, select "No" in this step.

② Press **(ENTER)**. "Complete!" appears, and the selected disc name is erased.

6 Press **(MENU)** twice.

To cancel the erasing procedure altogether, press **(MENU)** twice anywhere before step 5.

## Radio

## Storing stations automatically

### — Best Tuning Memory (BTM)

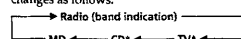
The unit selects the stations with the strongest signals and stores them in the order of their frequency. You can store up to 6 stations of each band (FM1, FM2, FM3, AM1, and AM2).

### Caution

When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press **(SOURCE)** repeatedly to select the radio.

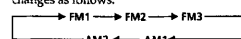
Each time you press **(SOURCE)**, the source changes as follows:



\* If the corresponding optional equipment is not connected, these items will not appear.

2 Press **(MODE)** repeatedly to select the band.

Each time you press **(MODE)**, the band changes as follows:



3 Press **(MENU)**, then press either side of **(DISCPRST)** repeatedly until "BTM" appears.

4 Press **(ENTER)**.

The unit stores stations in the order of their frequency on the number buttons. A beep sounds when the setting is stored.

### Notes

- The unit does not store stations with weak signals. If only a few stations can be received, some number buttons will retain their former settings.
- When a number is indicated on the display, the unit starts storing stations from the one currently displayed.
- If an MD is not in the unit, only the radio band appears, even if you press **(SOURCE)**.

## Storing only the desired stations

You can preset up to 18 FM stations (6 each for FM1, FM2, and FM3), up to 12 AM stations (6 each for AM1 and AM2) in the order of your choice.

1 Press **(SOURCE)** repeatedly to select the radio.

2 Press **(MODE)** repeatedly to select the band.

3 Press either side of **(SEEKAMS)** to tune in the station that you want to store on the number button.

4 Press the desired number button (1-6) for 2 seconds until "Memory" appears. The number button indication appears on the display.

### Note

If you try to store another station on the same number button, the previously stored station will be erased.

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## Receiving the stored stations

- 1 Press **[SOURCE]** repeatedly to select the radio.
- 2 Press **[MODE]** repeatedly to select the band.
- 3 Press the number button (**[1]** to **[6]**) on which the desired station is stored.

**Tip**  
Press either side of **[DISC/PRST]** to receive the stations in the order they are stored in the memory (Preset Search function).

### If you cannot tune in a preset station

Press either side of **[SEEK/AMS]** to search for the station (automatic tuning). Scanning stops when the unit receives a station. Press either side of **[SEEK/AMS]** repeatedly until the desired station is received.

**Note**  
If the automatic tuning stops too frequently, press **[MENU]**, then press either side of **[DISC/PRST]** repeatedly until "Local off" is displayed. Then press the (+) side of **[SEEK/AMS]** to select "Local on" (Local Seek model). Press **[ENTER]**. Only the stations with relatively strong signals will be tuned in.

- Tips**
- When you select the "Local on" setting, "LCL Seek" appears while the unit is searching for a station.
  - If you know the frequency of the station you want to listen to, press and hold either side of **[SEEK/AMS]** until the desired frequency appears (manual tuning).

## If FM stereo reception is poor — Monoaural Mode

- 1 During FM radio reception, press **[MENU]**, then press either side of **[DISC/PRST]** repeatedly until "Mono off" appears.
- 2 Press the (+) side of **[SEEK/AMS]** until "Mono on" appears. The sound improves, but becomes monoaural ("ST" disappears).
- 3 Press **[ENTER]**.

To return to normal mode, select "Mono off" in step 2.

## Automatic reception frequency adjustment — IF Auto function

If interference occurs, the "IF Auto" function of this unit will automatically narrow the reception frequency to eliminate noise. In such cases, some FM stereo broadcasts may become monoaural. If you would like to hear such broadcasts in stereo, manually switch to the "Wide" setting.

- 1 During radio reception, press **[MENU]**, then press either side of **[DISC/PRST]** repeatedly until "IF Auto" appears.
- 2 Press the (+) side of **[SEEK/AMS]** until "Wide" appears.
- 3 Press **[ENTER]**.

**Note**  
When you widen the frequency using Wide mode, you may get some interference.

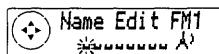
## Storing station names

### — Station Memo

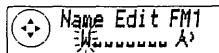
You can assign a name to each radio station and store it in memory. The name of the station currently tuned in appears on the display. You can assign a name using up to 8 characters for a station.

### Storing the station names

- 1 Tune in a station whose name you want to store.
- 2 Press **[MENU]**, then press either side of **[DISC/PRST]** repeatedly until "Name Edit" appears.
- 3 Press **[ENTER]**.

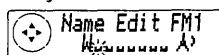


- 4 Enter the characters.
  - Press the (+) side of **[DISC/PRST]** repeatedly to select the desired characters.  
(A → B → C → ... → Z → 0 → 1 → 2 → ... → 9 → + → - → \* → / → \ → > → < → . → \_)



If you press the (-) side of **[DISC/PRST]** repeatedly, the characters appear in reverse order. If you want to put a blank space between 2 characters, select " ".

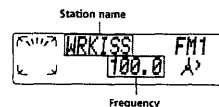
- 5 Press the (+) side of **[SEEK/AMS]** after locating the desired character.



If you press the (-) side of **[SEEK/AMS]**, you can move back to the left.

- 6 Repeat steps 4 and 5 to enter the entire name.

- 5 Press **[ENTER]**.



- Tips**
- To erase or correct a name, enter " " for each character.
  - There is another way to start storing station names: Press **[LIST]** for 2 seconds instead of performing steps 2 and 3. You can also complete the operation by pressing **[LIST]** for 2 seconds instead of performing step 5.

### Erasing a station name

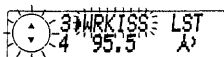
- 1 During radio reception, press **[MENU]**, then press either side of **[DISC/PRST]** repeatedly until "Name Del" appears.
- 2 Press **[ENTER]**.
- 3 Press either side of **[DISC/PRST]** repeatedly to select the station whose name you want to erase.
- 4 Press **[ENTER]** for 2 seconds. The name is erased. Repeat steps 3 to 4 if you want to erase other names.
- 5 Press **[MENU]** twice. The unit returns to normal radio reception mode.

**Note**  
If you have already erased all of the station names, "NO Data" appears in step 4.

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## Locating a station by name — List-up

- 1 During radio reception, press **[LIST]** momentarily. The name assigned to the station currently tuned in flashes.



- 2 Press either side of **[DISC/PRST]** repeatedly until you find the desired station. If no name is assigned to the selected station, the frequency appears on the display.
- 3 Press **[ENTER]** to tune in the desired station.

**Notes**

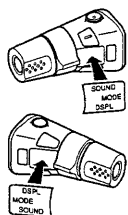
- When using the card remote commander, press **[DISC]** to return to normal play mode. When operating just by the unit's button, the display returns to normal play mode after 5 seconds.
- If you have a TV tuner connected, the list-up indication will not appear on the display of the unit.

## Other Functions

You can also control the unit with a rotary commander (optional).

## Labeling the rotary commander

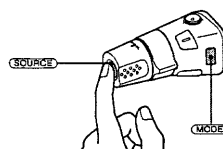
Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.



## Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls. You can also control optional CD/MD units with the rotary commander.

### By pressing buttons (the SOURCE and MODE buttons)



Each time you press **[SOURCE]**, the source changes as follows:

Radio → CD\* → MD → TV\* → Radio

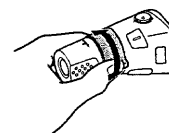
\* If the corresponding optional equipment is not connected, these items will not appear.

Pressing **[MODE]** changes the operation in the following ways:

- Radio: FM1 → FM2 → FM3 → AM1 → AM2 → FM1
- CD unit\*: CD1 → CD2 → ... → CD1
- MD unit\*: MD1 → MD2 → ... → MD1
- TV/Video\*: TV1 → TV2 → AUX → TV1

\* If the corresponding optional equipment is not connected, these items will not appear.

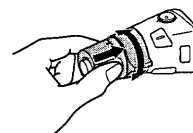
### By rotating the control (the SEEK/AMS control)



Rotate the control momentarily and release it to:

- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to find a specific station.

### By pushing in and rotating the control (the PRESET/DISC control)



Push in and rotate the control to:

- Receive the stations stored on the number buttons.
- Change the disc\*.

\* When an optional CD/MD unit is connected.

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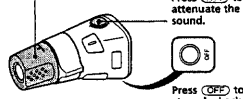
32

33



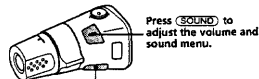
### Other operations

Rotate the VOL control to adjust the volume.



Press (ATT) to attenuate the sound.

Press (OFF) to stop playback or radio reception.



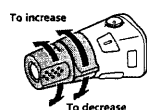
Press (SOUND) to adjust the volume and sound menu.

Press (DSPL) to change the displayed item.

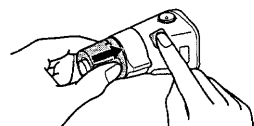
**Note**  
If your car has no ACC (accessory) position on the ignition switch, be sure to press (OFF) for 2 seconds to turn off the clock indication after turning off the ignition.

### Changing the operative direction

The operative direction of controls is factory-set as shown below.



If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.



Press (SOUND) for 2 seconds while pushing the VOL control.

### Tip

You can also change the operative direction of these controls with the unit (see "Changing the sound and display settings" on page 35).

## Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader.  
You can store the bass and treble levels independently for each source.

- 1 Select the item you want to adjust by pressing (SOUND) repeatedly. Each time you press (SOUND), the item changes as follows:  
Bass → Treble → Balance (left-right) → Fader (front-rear)

- 2 Adjust the selected item by pressing either side of (SEEK/AMS). When adjusting with the rotary commander, press (SOUND) and rotate the VOL control.

### Note

Adjust within 3 seconds after selecting the item.

## Quickly attenuating the sound

(With the rotary commander or the card remote commander)

Press (ATT) on the rotary commander or card remote commander.  
"ATT on" appears on the display momentarily.

To restore the previous volume level, press (ATT) again.

### Tip

When the interface cable of a car telephone is connected to the ATT lead, the unit decreases the volume automatically when a telephone call comes in (Telephone ATT function).

## Changing the sound and display settings

The following items can be set:

### Set Up

- Clock (page 9)
- Beep — to turn the beeps on or off.
- RM (Rotary Commander) — to change the operative direction of the controls of the rotary commander.
  - Select "norm" to use the rotary commander as the factory-set position.
  - Select "rev" when you mount the rotary commander on the right side of the steering column.
- English/Français/Español — to select the display language.

### Display

- D.Info (Dual Information) — to display the clock and the play mode at the same time (on).
- SA (Spectrum Analyser) — to change the display pattern of the equalizer display.
- Dimmer — to change the brightness of the display.
  - Select "Auto" to dim the display only when you turn the lights on.
  - Select "on" to dim the display.
  - Select "off" to deactivate the Dimmer.
- Contrast — to adjust the contrast if the indications on the display are not recognizable because of the unit's installation position.
- M.Dspl (Motion Display) — to turn the motion display on or off.
- A.Scroll (Auto Scroll) (page 11)

### Sound

- Loud (Loudness) — to enjoy bass and treble even at low volumes. The bass and treble will be reinforced.

- 1 Press (MENU).

- 2 Press either side of (DISC/PRST) repeatedly until the desired item appears. Each time you press the (-) side of (DISC/PRST), the item changes as follows:

### Example:

Clock → Beep → RM → English/Français/Español → D.Info → SA → Dimmer → Contrast → M.Dspl → A.Scroll → Loud

\* When no CD is playing on a unit with the CD TEXT function or no MD is playing, this item will not appear.

- 3 Press the (+) side of (SEEK/AMS) to select the desired setting (Example: on or off).

- 4 Press (ENTER). After the mode setting is completed, the display returns to normal play mode.

### Note

The displayed item will differ depending on the source.

### Tip

You can easily switch among categories ("Set Up," "Display," "Sound," "Play Mode," and "Edit Mode") by pressing either side of (DISC/PRST) for 2 seconds.

## Selecting the spectrum analyzer

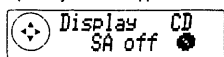
The sound signal level is displayed on a spectrum analyzer. You can select a display pattern from 1 to 5, or automatic display mode.

| Mode    | Display pattern  |
|---------|--|
| SA 1    | ..   ..  |
| SA 2    | —+—+—+—  |
| SA 3    | —+—+—+—  |
| SA 4    | —+—+—+—  |
| SA 5    | —+—+—+—  |
| off     | Cancel   |
| SA Auto | All of these display patterns appear one by one automatically. |

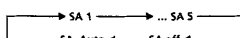
- 1 Press (SOURCE) to select a source (radio, CD, or MD).

- 2 Press (MENU).

- 3 Press either side of (DISC/PRST) repeatedly until "SA" appears.



- 4 Press either side of (SEEK/AMS) repeatedly to select the desired setting. Each time you press the (+) side of (SEEK/AMS), the setting changes as follows:



- 5 Press (ENTER).

### Notes

- \* If you select the "M.Dspl 1" or "M.Dspl 2" setting, the spectrum analyzer will not be displayed.
- \* If you select the "SA 1" or "SA 2" setting, the disc name and track name will not be displayed.
- \* If you select the "SA 3" or "SA 4" setting, source indication will not be displayed.

## TV/Video (optional)

You can control an optional TV tuner and TV monitor with this unit.

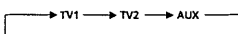
### Tip

You can record the audio sound of a TV program or video. For details, see "Recording the audio sound of a TV program or video" on page 22.

## Watching the TV

- 1 Press (SOURCE) repeatedly until "TV" or "AUX" appears.

- 2 Press (MODE) repeatedly to select the desired TV band.



## Watching a video

- 1 Press (SOURCE) repeatedly until "TV" or "AUX" appears.

- 2 Press (MODE) repeatedly to select "AUX". Play the video.

### Note

The indication automatically switches to "VIDEO 1" soon after "AUX" is displayed.

## Storing TV channels automatically

The unit selects the TV channels with the strongest signals and assigns them to number buttons in order of their frequency.

### Caution

If tuning in a station while driving, use Best Tuning Memory to prevent accidents.

- 1 Select "TV" (see "Watching the TV" on page 36).

- 2 Press (MENU), then press either side of (DISC/PRST) repeatedly until "Auto Mem" appears.

- 3 Press (ENTER).

The unit assigns TV channels to the number buttons in order of their frequency. A beep sounds when the setting is stored.

### Notes

- \* The unit does not assign TV channels with weak signals. If only a few TV channels with strong signals can be received, some number buttons will remain empty.
- \* When a preset number is indicated on the display, the unit starts assigning TV channels to buttons from the one currently displayed.

## Storing only the desired TV channels

You can assign up to 12 channels (6 each for TV1 and TV2) to the number buttons in the order of your choice.

- 1 Select "TV" (see "Watching the TV" on page 36).

- 2 Press either side of (SEEK/AMS) to tune in the TV channel you want to assign to each number button.

- 3 Press and hold the desired number button (1 to 12) until you hear a small beep. The number button indication and "Memory" appear on the display.

### Note

If you try to assign another channel to the same number button, the previously assigned channel will be erased.



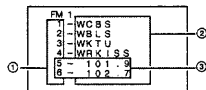
## Storing the TV channel names

Follow the steps in "Storing station names" (page 31).

### Displaying the TV or radio station names

Press **LIST** during TV or radio reception.

Example: When receiving the FM1 band



- ① Preset numbers
- ② Stored station names
- ③ Frequencies\*

\* If the name of a station is not assigned to number buttons, the frequency of that station will be displayed instead.

To turn off the list display on the TV monitor, press **LIST**.

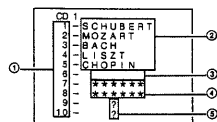
#### Notes

- It may take a few moments before all indications appear on the display.
- The current TV channel does not appear during list display.
- The contents of preset memory cannot be listed when the unit is in Simultaneous Play mode (page 39).

## Displaying the information stored on a disc

Press **LIST** during CD/MD playback.

Example: When CD unit 1 is selected.



- ① Disc numbers
- ② Stored titles
- ③ No disc is loaded\*
- ④ No stored titles\*\*
- ⑤ TOC information has not yet been identified\*\*

\*\* A blank space displayed next to a disc number represents an empty slot in the disc magazine.

\*\* If a title is not registered, "\*\*\*\*\*" is displayed.

\*\* If the disc information has not yet been read by the unit, "?" is displayed.

To turn off the list display on the TV monitor, press **LIST**.

#### Notes

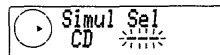
- It may take a few moments before all indications appear on the display.
- The current TV channel does not appear during list display.
- The contents of preset memory cannot be listed when the unit is in the Simultaneous Play mode (page 39).
- If the source is an MD, the stored track names will also be displayed.

## Watching the TV or video while listening to a CD or MD — Simultaneous Play

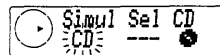
The simultaneous play function does not work while you are listening to the radio.

1 Press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "Simul Sel" appears.

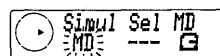
2 Press **(ENTER)**.



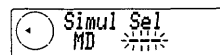
3 Press the (-) side of **(SEEK/AMS)**.



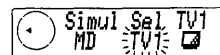
4 Press **(SOURCE)** repeatedly to select CD or MD.



5 Press the (+) side of **(SEEK/AMS)**.



6 Press **(SOURCE)** repeatedly to select a TV or video.



7 Press **(ENTER)**.  
Simultaneous Play starts.

If you are already watching the TV or video and want to listen to a CD or MD as well, follow the same steps.

### Returning to normal mode

To cancel the CD or MD, select "---" in step 3.

To cancel the TV or video, select "---" in step 5.

#### Note

If you press **(OFF)** or **(EJECT)** on a CD/MD unit while the unit is in Simultaneous Play mode, Simultaneous Play is canceled.



## Connections

### Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Be careful not to pinch any wires between the screw and the body of the car, or this unit, or between any moving parts such as the seat railing, etc.
- Connect the yellow and red power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- Run all ground wires to a common earth surface.
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- The use of optical instruments with this product will increase eye hazard.

### Warning when installing in a car without ACC (accessory) position on the ignition switch

Be sure to press **OFF** on the unit for 2 seconds to turn off the clock display after turning off the ignition.

When you press **OFF** only momentarily, the clock display does not turn off and this causes battery drain.

### Reset button

When the installation and connections are complete, be sure to set the DIGITAL/ANALOG switch on the CD/MD unit to the appropriate position and press the reset button with a ball-point pen, etc.

### Connecting the optical cable

When you connect a CD/MD unit compatible with the optical digital connection, connect the optical cable to the optical digital adaptor, then plug the adaptor into the DIGITAL IN jack on the unit. After the connection, secure the adaptor with the supplied attachment ① and screws ② on the unit.

#### Note

Do not bend the optical cable too much. If the bend radius is less than 10 cm, sound may not be reproduced.

## Connexions

### Précautions

- Cet appareil est conçu pour fonctionner sur tension continue de 12 V avec masse négative.
- Veillez à ne coincer aucun fil entre la vis et la carrosserie ou cet appareil ou aucun élément mobile comme les glissières du siège, etc.
- Branchez les fils d'entrée d'alimentation jaune et rouge seulement après avoir terminé tous les autres branchements.
- Veillez à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- Rassemblez tous les fils de terre en un point de masse commun.
- Branchez le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auxquels ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, branchez l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, branchez l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.

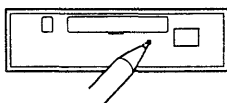
### Si votre voiture n'est pas équipée d'une position ACC (accessoire) au niveau du commutateur d'allumage

Assurez-vous d'appuyer sur **OFF** sur l'unité pendant plus de 2 secondes afin de désactiver l'affichage de l'horloge après avoir coupé le contact.

Lorsque vous appuyez brièvement sur **OFF**, l'affichage de l'horloge ne s'éteint pas et cela provoque une usure de la batterie.

### Touche de réinitialisation

Lorsque l'installation et les connexions sont terminées, ne pas oublier de régler le commutateur DIGITAL/ANALOG sur le lecteur CD/MD sur la position appropriée et d'appuyer sur la touche de réinitialisation avec la pointe d'un stylo bille ou un objet similaire.

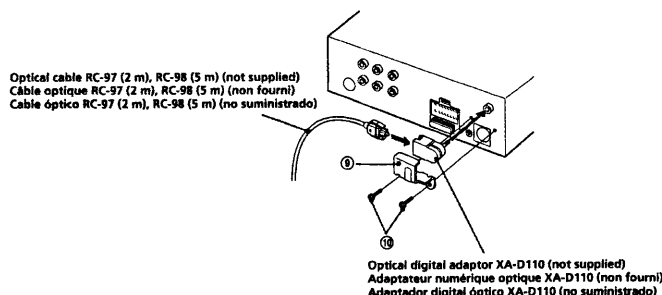


### Connexion du câble optique

Lorsque vous utilisez une connexion numérique compatible avec un lecteur CD/MD compatible, branchez le câble optique dans l'adaptateur numérique optique, puis insérez le câble dans la prise DIGITAL IN du lecteur. Une fois la connexion effectuée, fixez correctement l'adaptateur au lecteur avec la fixation ① et les vis ② fournis.

#### Remarque

Ne fléchissez pas trop le câble optique. Si le rayon de fléchissement est inférieur à 10 cm, il est possible qu'aucun son ne soit reproduit.



## Conexiones

### Precauciones

- Esta unidad ha sido diseñada para alimentarse con CC 12 V, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los raíles del asiento, etc.
- Conecte los cables amarillo y rojo de entrada de alimentación solamente una vez conectados el resto de los cables.
- Asegúrese de conectar el cable rojo de entrada de alimentación al terminal de alimentación positivo de 12 V que reciba energía al poner la llave de encendido en la posición auxiliar.
- Conecte todos los cables de puesta a masa a una superficie de tierra común.
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

### Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (auxiliar) en el interruptor de encendido

Asegúrese de presionar **OFF** en la unidad durante 2 segundos para desactivar la indicación del reloj después de apagar el encendido.

Si presiona **OFF** sólo momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

### Botón de restauración

Una vez finalizadas la instalación y las conexiones, asegúrese de ajustar el interruptor DIGITAL/ANALOG de la unidad de CD/MD en la posición apropiada y de presionar el botón de restauración con un bolígrafo, etc.

### Conexión del cable óptico

Si conecta una unidad de CD/MD compatible con la conexión digital óptica, conecte el cable óptico al adaptador digital óptico y, a continuación, conecte el adaptador a la toma DIGITAL IN de la unidad. Tras la conexión, fije en la unidad el adaptador con la pieza de sujeción ① y los tornillos ② suministrados.

#### Note

No doble el cable óptico en exceso. Si el radio de curvatura es inferior a 10 cm, es posible que el sonido no se reproduzca.

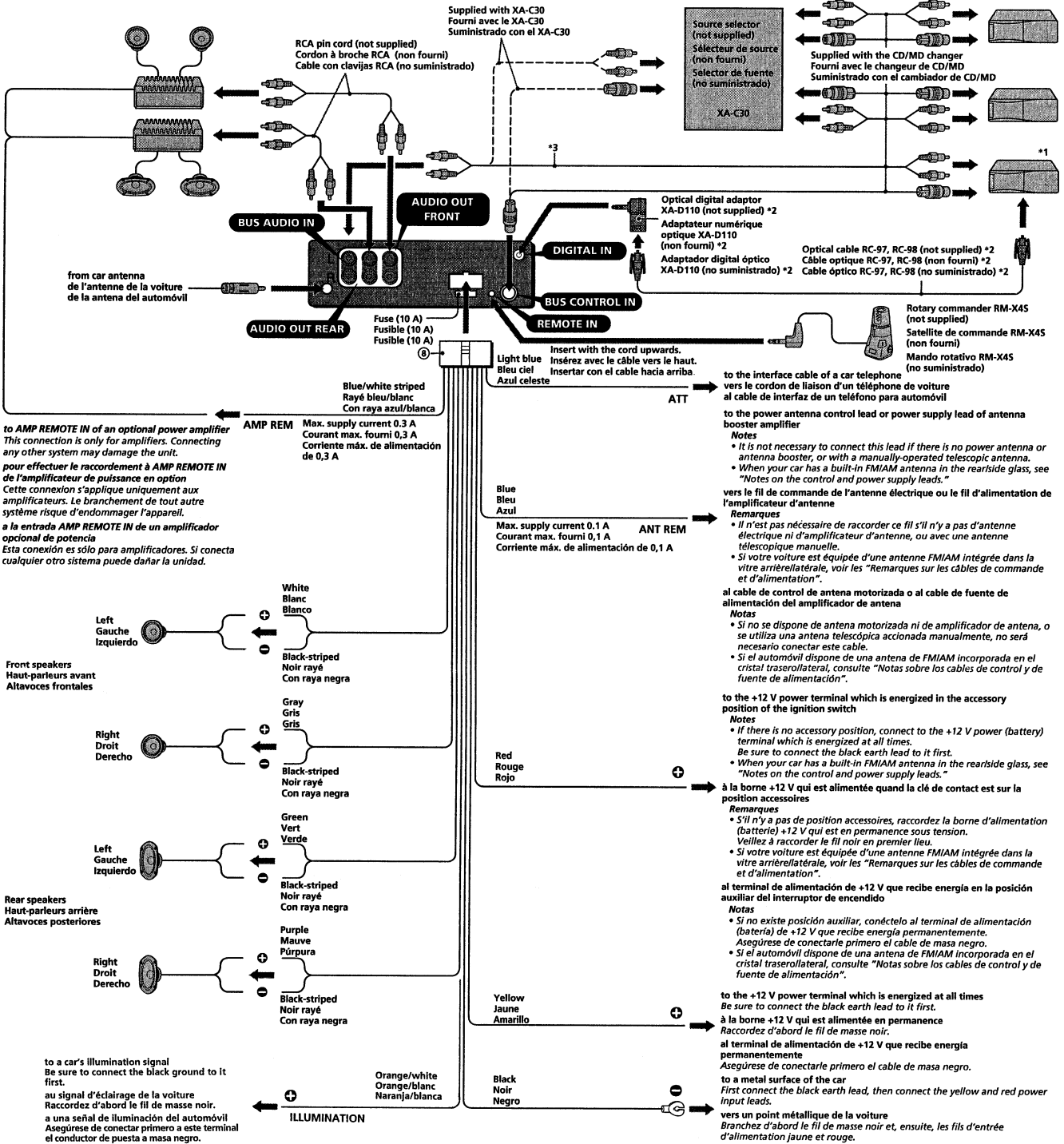


# **Connection example** **Exemple de connexion** **Ejemplo de conexiones**

\*1 CD/MD changer with digital output  
 Be sure to set the DIGITAL/ANALOG switch on the CD/MD unit to the appropriate position and press the reset button on this MiniDisc Recorder after connection.  
 \*2 For digital connection  
 \*3 For analog connection

\*1 Changeur de CD/MD avec sortie numérique  
 Assurez-vous de régler le commutateur DIGITAL/ANALOG du lecteur CD/MD sur la position correcte et appuyez sur le bouton de réinitialisation de l'enregistreur MiniDisc après la connexion.  
 \*2 Pour une connexion numérique  
 \*3 Pour une connexion analogique

\*1 Cambiador de CD/MD con salida digital  
 Asegúrese de ajustar el interruptor DIGITAL/ANALOG de la unidad de CD/MD en la posición adecuada y de presionar el botón de restauración de esta grabadora de MiniDisc tras la conexión.  
 \*2 Para conexión digital  
 \*3 Para conexión analógica



**Notes on the control and power supply leads**  
 • The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner.  
 • When your car has built-in FMIAM antenna in the rear side glass, it is necessary to connect the power antenna control lead (blue) or the accessory power input lead (red) to the power terminal of the existing antenna booster. For details, consult your dealer.  
 • A power antenna without a relay box cannot be used with this unit.  
**Memory hold connection**  
 When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.  
**Notes on speaker connection**  
 • Before connecting the speakers, turn the unit off.  
 • Use speakers with an impedance of 4 to 8 Ω, and with adequate power handling capacities. Otherwise, the speakers may be damaged.  
 • Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.  
 • Do not attempt to connect the speakers in parallel.  
 • Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.

**Remarques sur les câbles de commande et d'alimentation**  
 • Le fil de commande d'antenne (bleu) assure une alimentation de +12 V CC lorsque vous mettez le sintoniseur sous tension.  
 • Si votre voiture est équipée d'une antenne FMIAM intégrée dans la vitre arrière latérale, il est nécessaire de raccorder le fil de commande de l'antenne électrique (bleu) ou le fil d'entrée d'alimentation des accessoires (rouge) de l'amplificateur d'antenne existant. Pour plus de détails, consultez votre revendeur.  
 • Une antenne électrique sans boîtier de relais ne peut être utilisée avec cet appareil.  
**Connexion pour la conservation de la mémoire**  
 Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.  
**Remarques sur la connexion des haut-parleurs**  
 • Avant de raccorder les haut-parleurs, mettez l'appareil hors tension.  
 • Utilisez des haut-parleurs ayant une impédance de 4 à 8 Ω et une capacité adéquate sous peine de les endommager.  
 • Ne raccordez pas les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.  
 • Ne tentez pas de raccorder les haut-parleurs en parallèle.  
 • Ne raccordez pas des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veillez à raccorder des haut-parleurs passifs à ces bornes.

**Notas sobre los cables de control y de fuente de alimentación**  
 • El cable (azul) de control de la antena motorizada suministra + CC 12 V al encender el sintonizador.  
 • Si el automóvil dispone de una antena de FMIAM incorporada en el cristal trasero lateral, será necesario conectar el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.  
 • Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.  
**Conexión para protección de la memoria**  
 Si conecta el cable de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.  
**Notas sobre la conexión de los altavoces**  
 • Antes de conectar los altavoces, desconecte la alimentación de la unidad.  
 • Utilice altavoces con una impedancia de 4 a 8 Ω, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.  
 • No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.  
 • No intente conectar los altavoces en paralelo.  
 • No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciera, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.

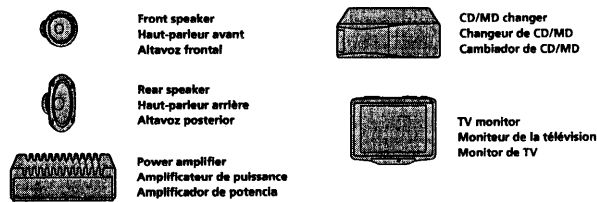


# Connection diagram Schéma de connexion Diagrama de conexiones

Equipment used in illustrations (not supplied)

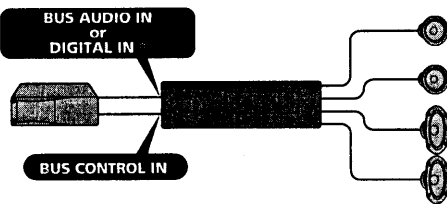
Appareils utilisés dans les illustrations (non fournis)

Equipos utilizados en las ilustraciones (no suministrados)



**I**

- \* CD/MD changer with digital output
- \* Changeur de CD/MD avec sortie numérique
- \* Cambiador de CD/MD con salida digital



Note

The maximum current drain (during REC Continue mode) for this connection is approximately 1.45 A.

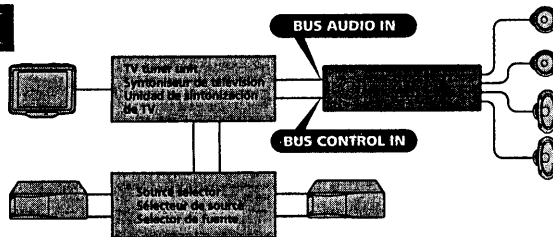
Remarque

La perte électrique maximum (en mode REC continu) pour cette connexion est d'environ 1,45 A.

Note

El consumo máximo de corriente (durante el modo de continuación de grabación) con esta conexión es de aproximadamente 1,45 A.

**II**



Notes

- \* For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.
- \* The maximum current drain (during REC Continue mode) for this connection is approximately 1.9 A (approximately 0.11 A per an additional CD/MD changer).

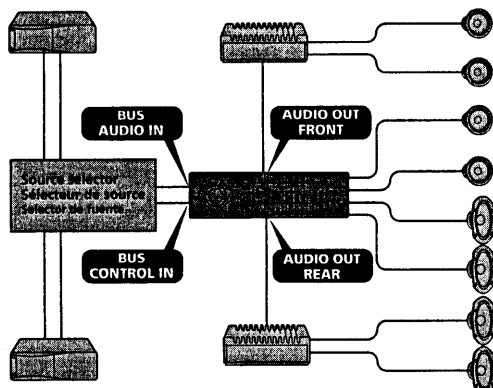
Remarques

- \* Dans le cas du raccordement de deux changeurs de CD/MD ou plus, le sélecteur de source XA-C30 (option) est indispensable.
- \* La perte électrique maximum (en mode REC continu) pour cette connexion est d'environ 1,9 A (et d'environ 0,11 A pour chaque changeur CD/MD supplémentaire).

Notes

- \* Si desea conectar dos o más cambiadores de CD/MD, necesitará el selector de fuente XA-C30 (opcional).
- \* El consumo máximo de corriente (durante el modo de continuación de grabación) con esta conexión es de aproximadamente 1,9 A (aproximadamente 0,11 A con un cambiador de CD/MD adicional).

**III**



Notes

- \* For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.
- \* Be sure to connect the earth cord before connecting the amplifier.
- \* The maximum current drain (during REC Continue mode) for this connection is approximately 1.49 A (approximately 0.11 A per an additional CD/MD changer).

Remarques

- \* Dans le cas du raccordement de deux changeurs de CD/MD ou plus, le sélecteur de source XA-C30 (option) est indispensable.
- \* Raccordez d'abord le fil de masse avant de connecter l'amplificateur.
- \* La perte électrique maximum (en mode REC continu) pour cette connexion est d'environ 1,49 A (et d'environ 0,11 A pour chaque changeur CD/MD supplémentaire).

Notes

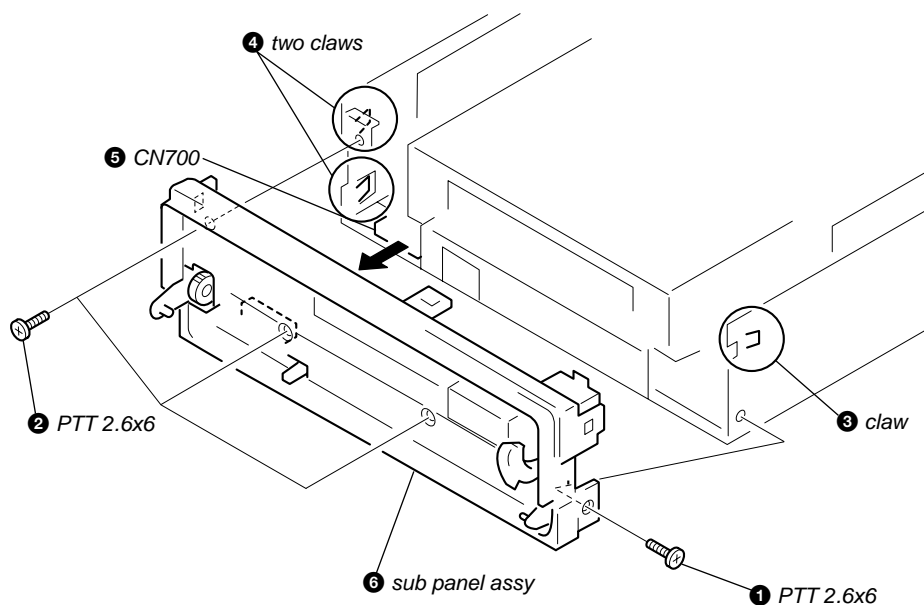
- \* Si desea conectar dos o más cambiadores de CD/MD, necesitará el selector de fuente XA-C30 (opcional).
- \* Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.
- \* El consumo máximo de corriente (durante el modo de continuación de grabación) con esta conexión es de aproximadamente 1,49 A (aproximadamente 0,11 A con un cambiador de CD/MD adicional).



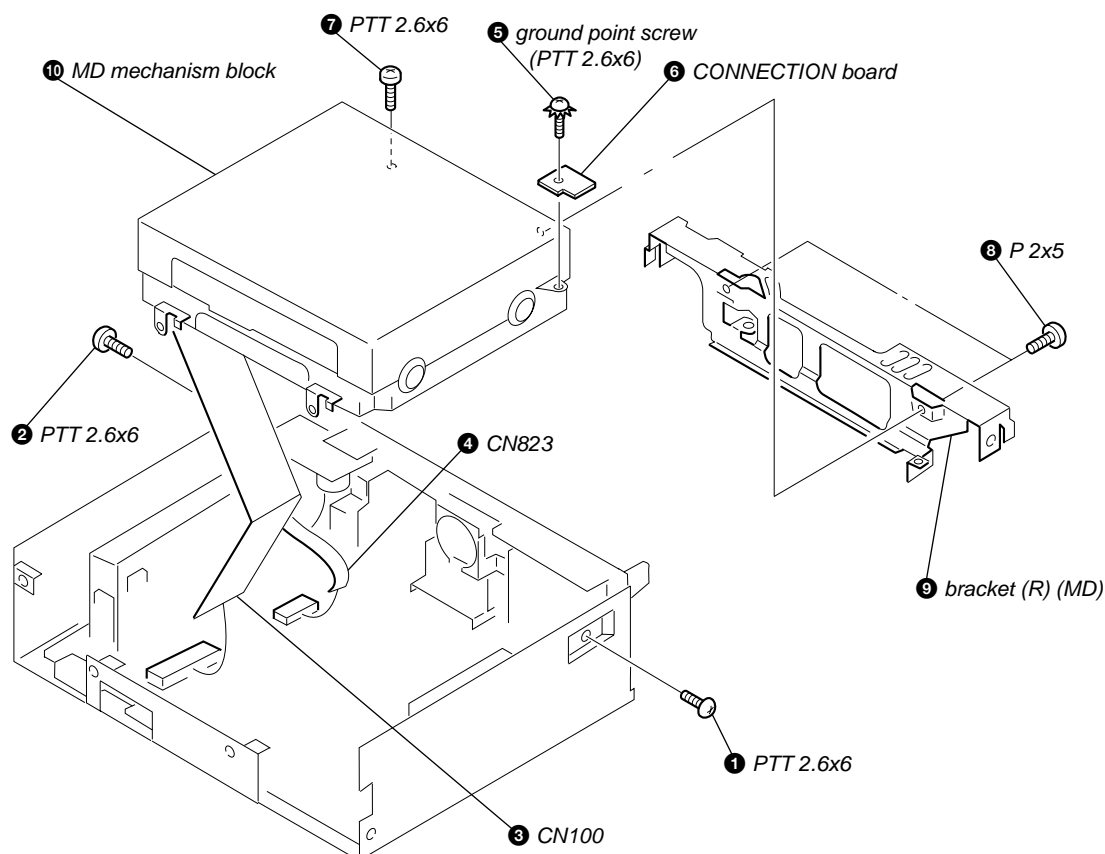
## SECTION 2 DISASSEMBLY

**Note :** Follow the disassembly procedure in the numerical order given.

### 2-1. SUB PANEL ASSY

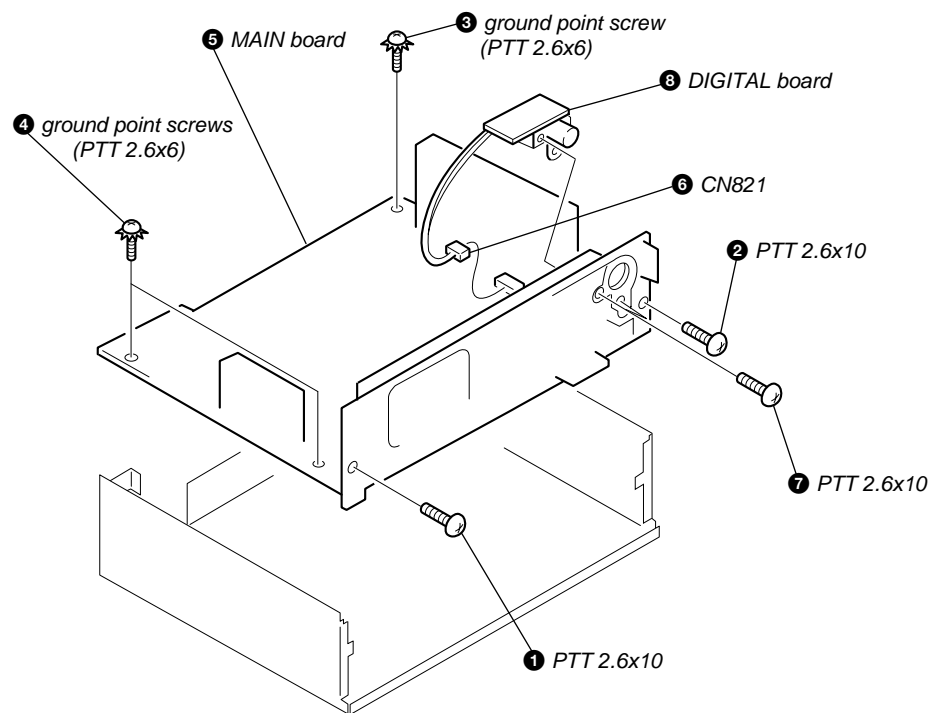


### 2-2. MD MECHANISM BLOCK

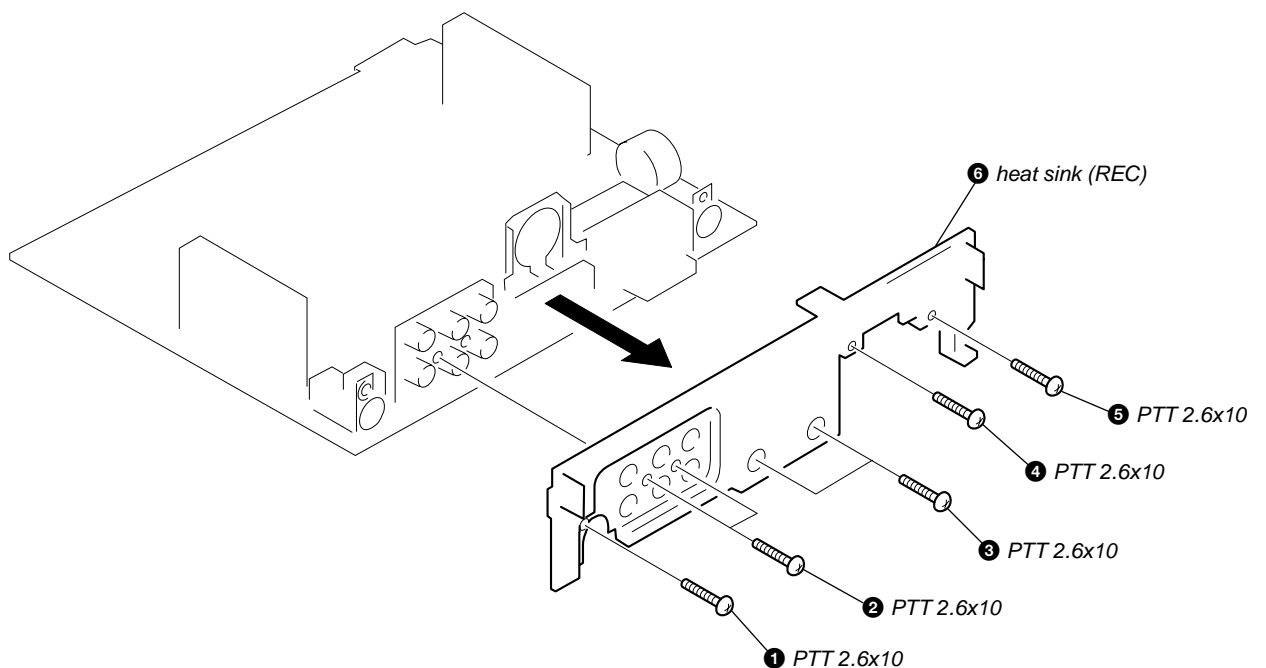




### 2-3. MAIN BOARD, DIGITAL BOARD

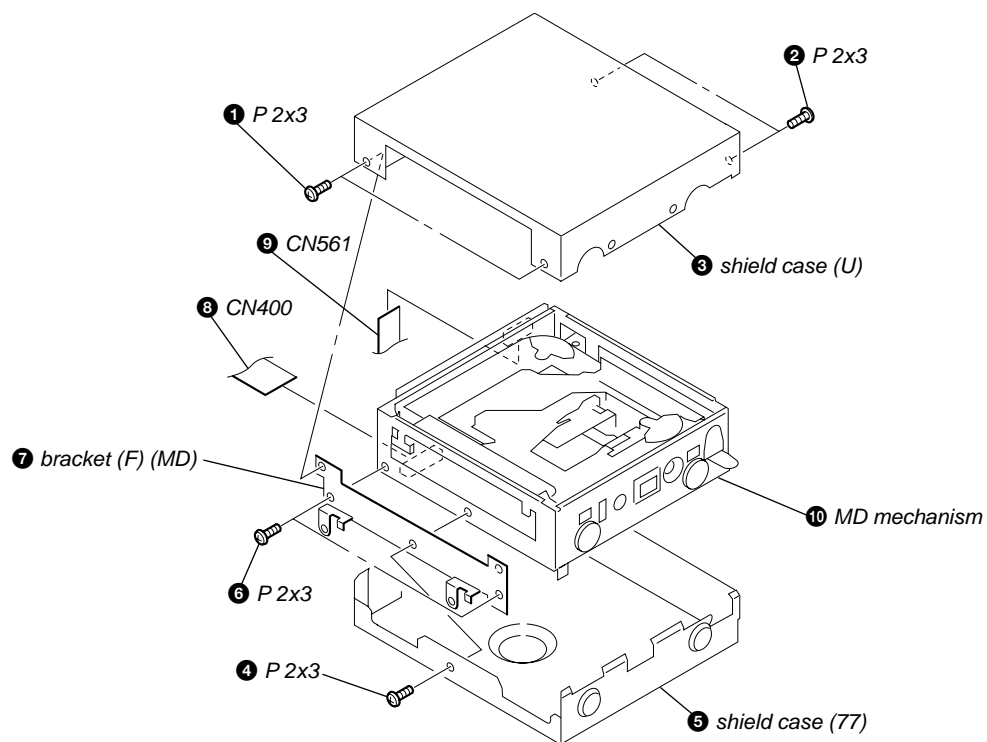


### 2-4. HEAT SINK (REC)

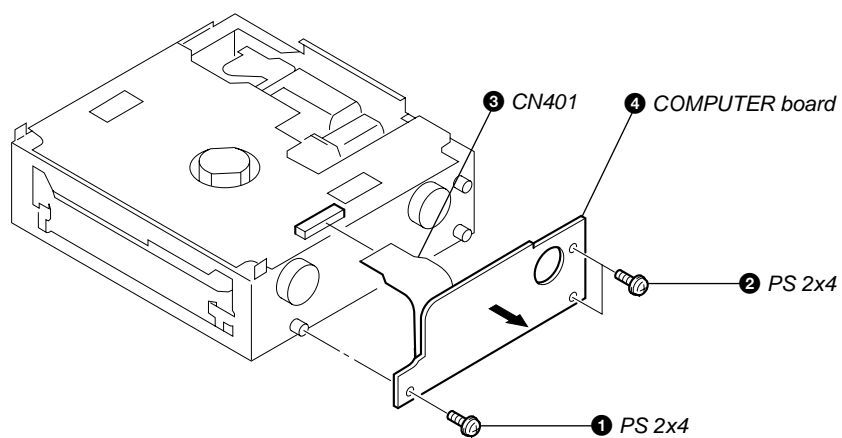




## 2-5. MD MECHANISM

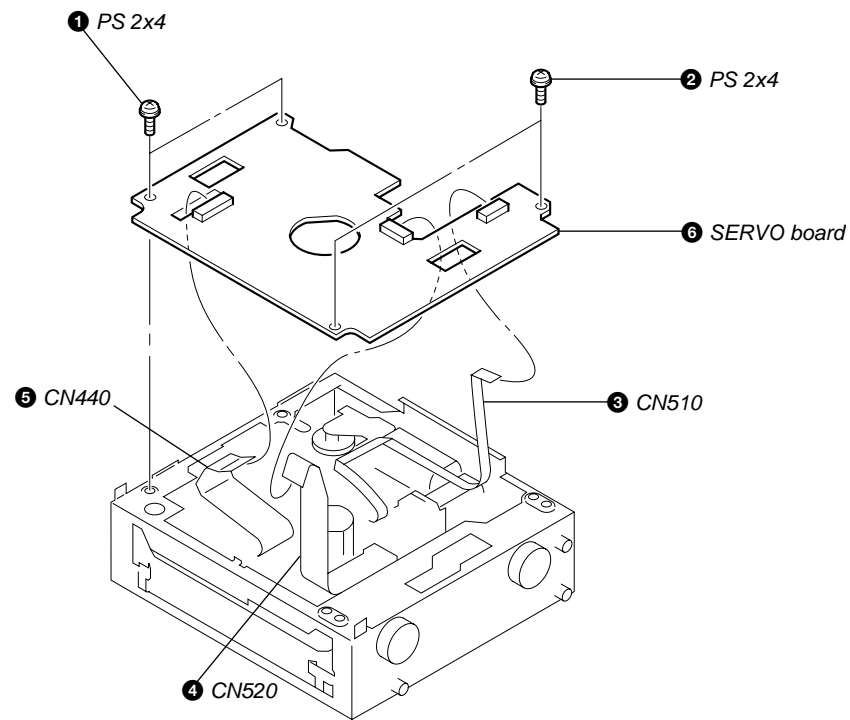


## 2-6. COMPUTER BOARD

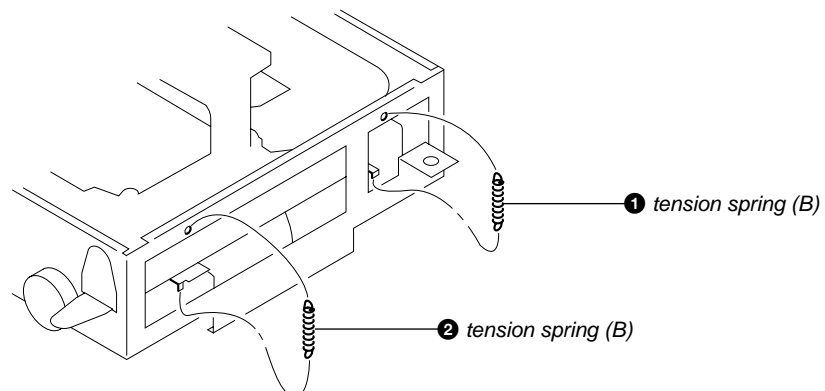




## 2-7. SERVO BOARD

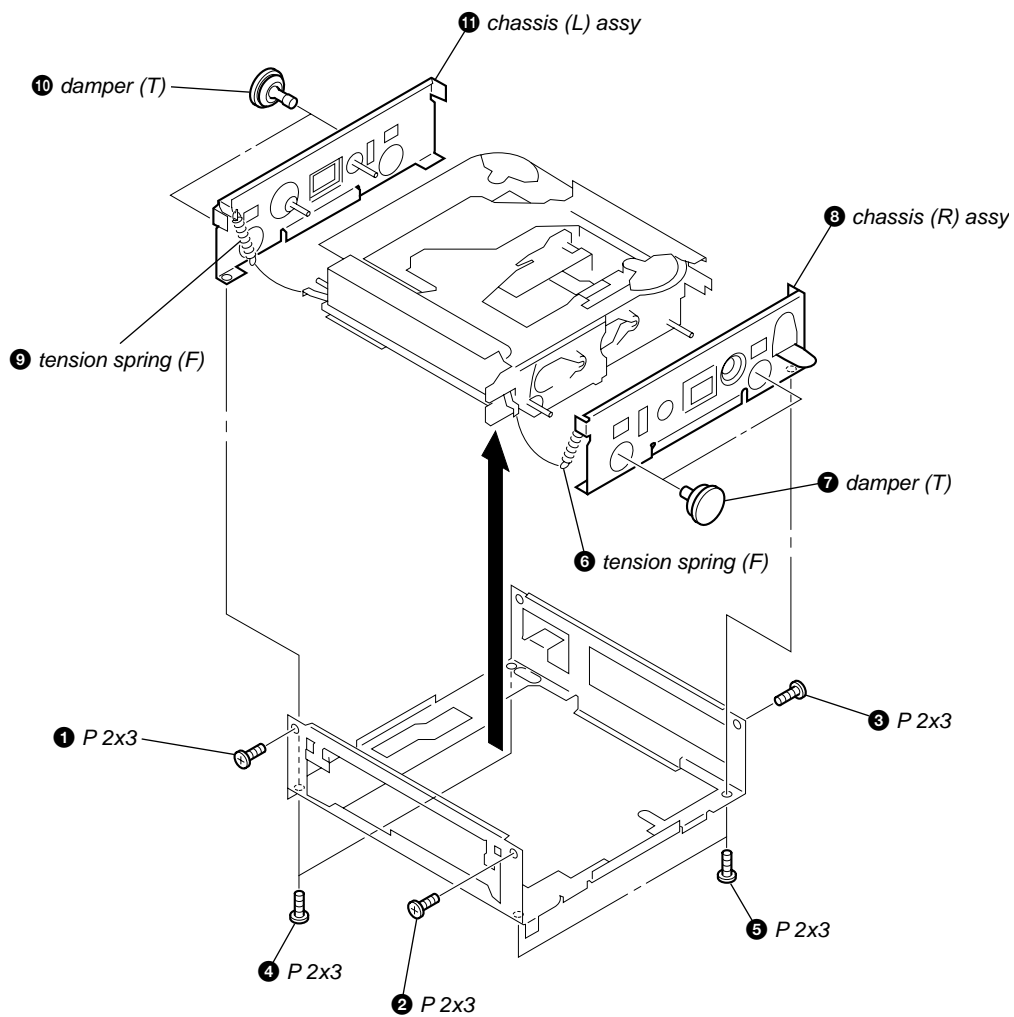


## 2-8. TENSION SPRING (B)

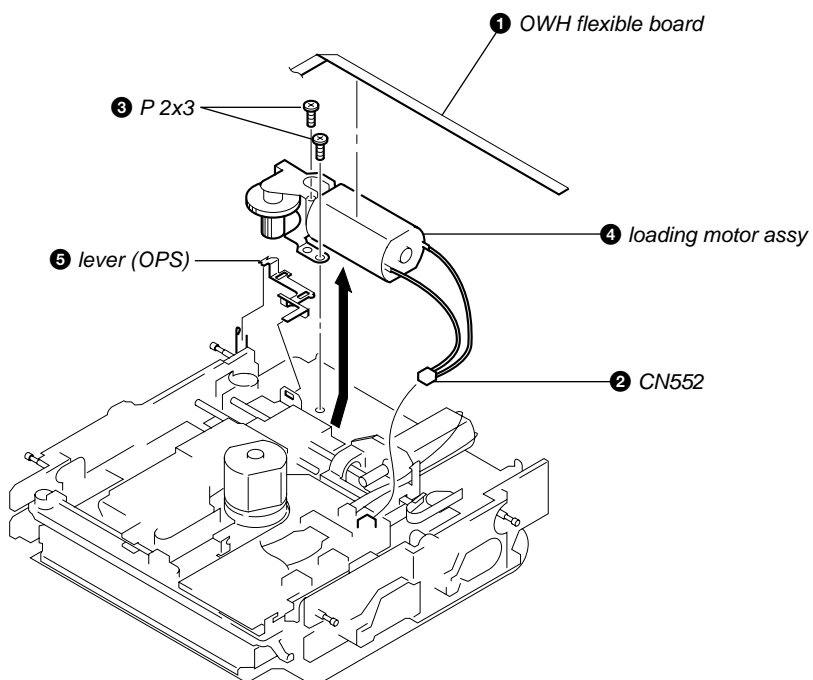




## 2-9. CHASSIS (L), (R) ASSY

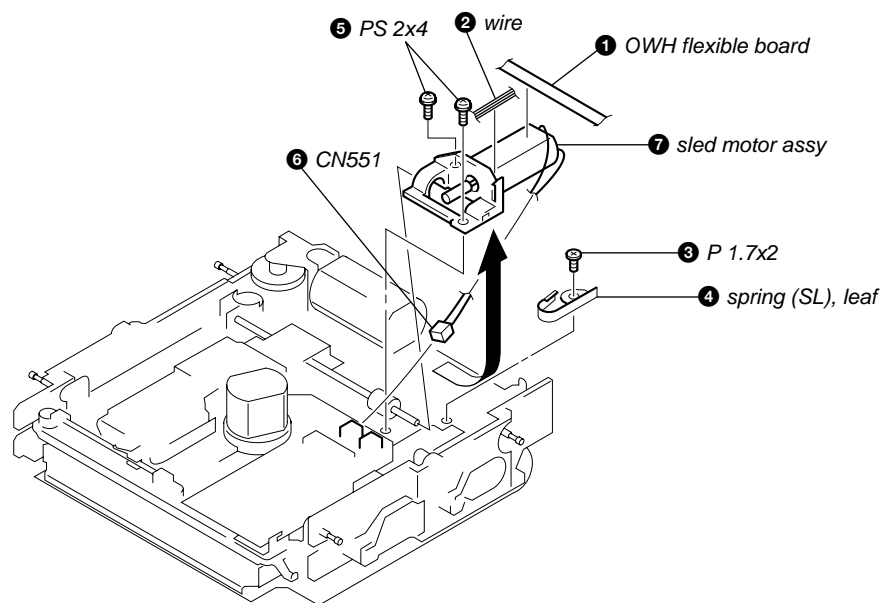


## 2-10. LOADING MOTOR ASSY

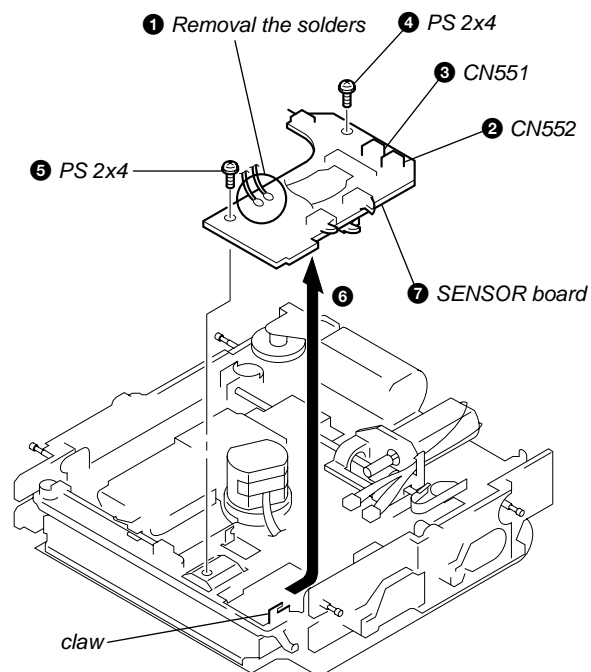




## 2-11. SLED MOTOR ASSY

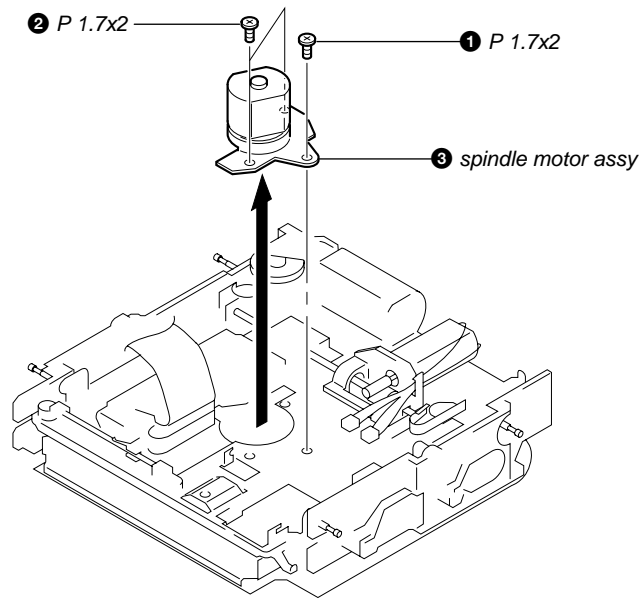


## 2-12. SENSOR BOARD

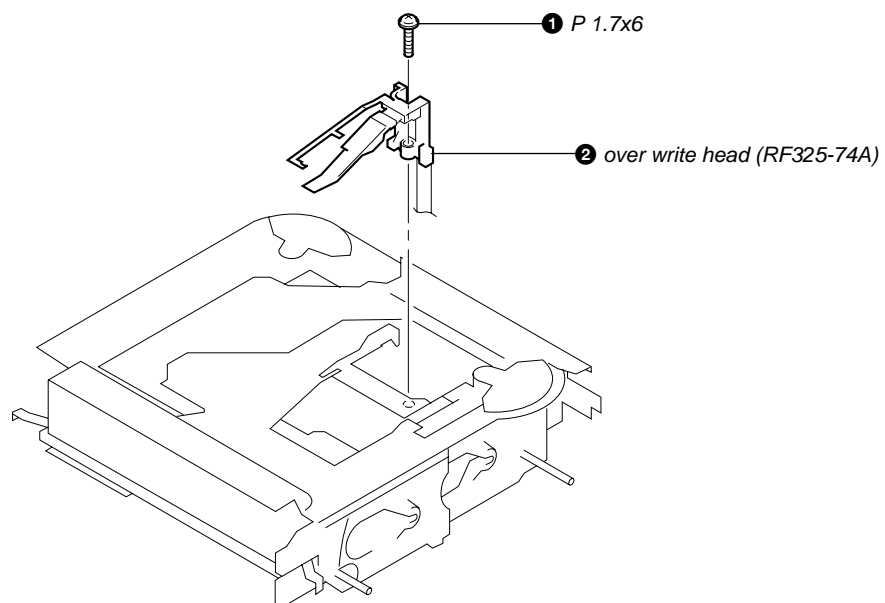




## 2-13. SPINDLE MOTOR ASSY

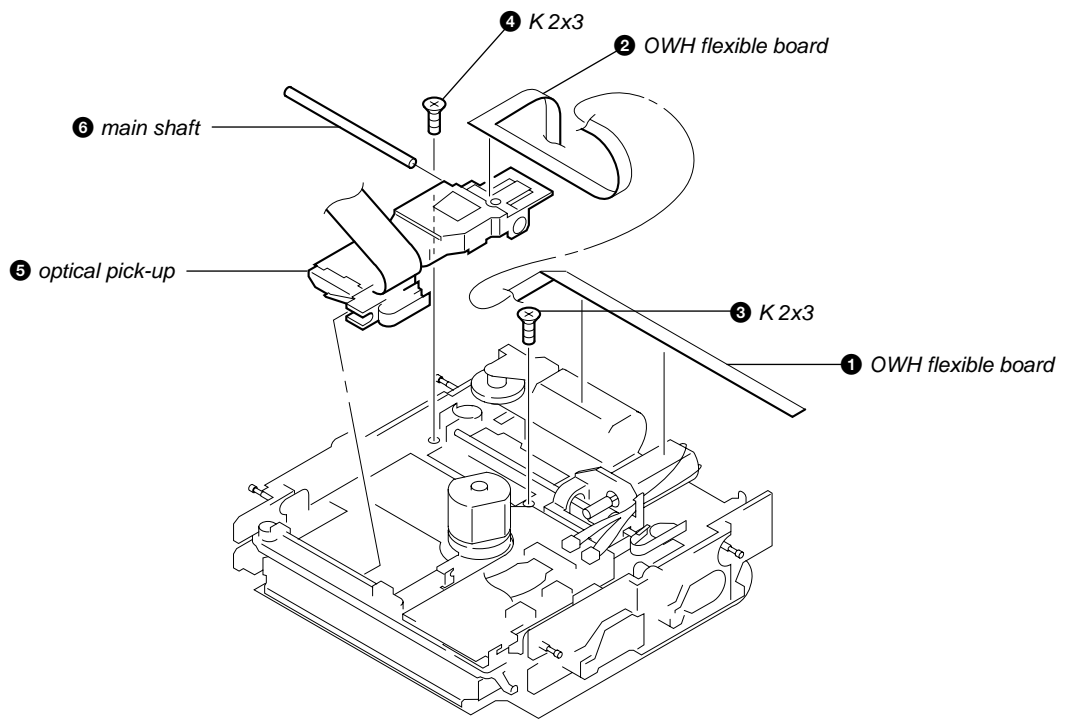


## 2-14. OVER WRITE HEAD





## 2-15. OPTICAL PICK-UP





## SECTION 3

### DIAGRAMS

#### 3-1. IC PIN DESCRIPTIONS

##### • IC560 MB90574FPV-G-297-BND (MD CONTROL)

| Pin No. | Pin Name  | I/O | Pin Description  |
|---------|-----------|-----|--|
| 1       | SCTX      | O   | Write data transmission timing output to CXD2652AR, ON/OFF output of magnet head |
| 2       | LDON      | O   | Laser ON/OFF control output (“H”: Laser ON)                                      |
| 3       | LOAD      | O   | Loading motor control output (Loading direction)                                 |
| 4       | EJECT     | O   | Loading motor control output (Eject direction)                                   |
| 5       | MDMON     | O   | MD mechanism deck power supply control output                                    |
| 6       | LNKOFF    | O   | LINK OFF output to SONY BUS (“H”: LINK OFF, “L”: LINK ON)                        |
| 7       | UNIREQ    | O   | Request output to SONY BUS (“H”: Request ON) (Not used in this set.)             |
| 8       | VCC       | —   | Power supply pin (+5 V)  |
| 9, 10   | NC        | —   | Not used (Open)  |
| 11      | FLASH-W   | I   | Select input for flash write (“L”: Flash write mode)                             |
| 12      | RXD/DSPSI | I   | UART RXD data input  |
| 13      | TXD/DSPSO | O   | UART TXD data output   |
| 14      | LIMIT-IN  | I   | Sled innermost track detection switch input (“L”: Innermost track)               |
| 15      | EE CKO    | O   | Serial clock output for EEPROM   |
| 16      | EE SIO    | I/O | EEPROM data input/output   |
| 17      | SENS IN   | I   | Disk photo sensor input (“H”: With desk)   |
| 18, 19  | NC        | —   | Not used (Open)  |
| 20      | SRDT      | I   | Data input from MD servo IC  |
| 21      | SWDT      | O   | Data output to MD servo IC   |
| 22      | SCLK      | O   | Clock output to MD servo IC  |
| 23, 24  | NC        | —   | Not used (Open)  |
| 25      | UNISI     | I   | Data input from SONY BUS   |
| 26      | UNISO     | O   | Data output to SONY BUS  |
| 27      | UNCKI     | I   | Clock input from SONY BUS  |
| 28      | MOD       | O   | Laser modulation select signal output  |
| 29, 30  | NC        | —   | Not used (Open)  |
| 31      | FOPEN     | I   | Front panel open signal input  |
| 32      | CLOSE OK  | O   | Front panel open/close request signal output                                     |
| 33      | VSS       | —   | Ground pin   |
| 34      | C         | —   | Power stabilization capacitor pin  |
| 35      | AGCHK     | O   | Effect output when aging operation end of test mode                              |
| 36      | AGING     | O   | Output of aging operation condition when test mode (Normally, open)              |
| 37      | TFTON     | O   | Output of drop running condition when test mode (Normally, open)                 |
| 38      | DVCC      | —   | Power supply pin for D/A converter (+5 V)  |
| 39      | DVSS      | —   | Ground pin for D/A converter   |
| 40      | ERR-PWM   | O   | PWM output of error rate (Normally, open)  |
| 41      | ADER-PWM  | O   | PWM output of AD error (Normally, open)  |
| 42      | AVCC      | —   | Power supply pin for A/D converter (+5 V)  |
| 43      | AVRH      | —   | External reference power supply for A/D converter (Connect to AVCC in this set.) |
| 44      | AVRL      | —   | External reference power supply for A/D converter (Connect to AVSS in this set.) |
| 45      | AVSS      | —   | Ground pin for A/D converter   |
| 46      | NC        | —   | Not used (Open)  |
| 47      | ACNT      | I   | A/D input for designation on aging times of LOADING/EJECT                        |
| 48      | DOB-SEL   | I   | A/D input for designation on digital out bit number (Fixed at “H” in this set)   |
| 49      | INIT      | I   | Initial input when reset   |
| 50, 51  | TEST 0, 1 | I   | Test pin (Normally, open)  |
| 52      | REF-SEL   | I   | Reference select input (Fixed at “L” in this set.)                               |
| 53      | NC        | —   | Not used (Open)  |
| 54      | VCC       | —   | Power supply pin (+5 V)  |
| 55      | TSTMOD    | I   | Test mode input (“L”: Test mode)   |



| Pin No. | Pin Name                    | I/O | Pin Description   |
|---------|-----------------------------|-----|---|
| 56      | TSTSO                       | O   | Data output for test mode display (Normally, open)  |
| 57      | TSTCKO                      | O   | Clock output for test mode display (Normally, open)   |
| 58 – 62 | NC                          | —   | Not used (Open)   |
| 63      | VSS                         | —   | Ground pin  |
| 64      | NC                          | —   | Not used (Open)   |
| 65      | $\overline{\text{DACRST}}$  | O   | Reset output to DAC IC  |
| 66      | DACCES                      | O   | Chip enable output to DAC (SUB)   |
| 67      | DAC SO                      | O   | DAC control serial data output  |
| 68      | DAC CKO                     | O   | DAC control serial clock output   |
| 69      | DAC CEF                     | O   | Chip enable output to DAC (FRONT)   |
| 70      | DAC CER                     | O   | Chip enable output to DAC (REAR)  |
| 71, 72  | NC                          | —   | Not used (Open)   |
| 73      | XIA                         | —   | Input for sub clock oscillation (Fixed at “H” in this set)  |
| 74      | XOA                         | —   | Input for sub clock oscillation (Connect to ground pin in this set)   |
| 75      | $\overline{\text{CC-XINT}}$ | I   | XINT interruption input from MD servo IC  |
| 76      | $\overline{\text{BUS-ON}}$  | I   | BUS ON input of SONY BUS  |
| 77      | BU-IN                       | I   | Power instantaneously cut off check port of system  |
| 78      | $\overline{\text{SQ-SY}}$   | I   | SUBQ SYNC interruption input from MD servo IC   |
| 79      | DISC-IN                     | I   | DISC-IN (cartridge in switch) sensor input of MD mechanism deck   |
| 80      | A-ATT                       | O   | Audio attenuator output (“H”: ATT ON)   |
| 81      | $\overline{\text{DQ-SY}}$   | I   | Subcord Q sync of DIGITAL IN U-bit CD format from MD servo IC   |
| 82      | NC                          | —   | Not used (Open)   |
| 83      | EJECT IN                    | I   | EJECT (MD) switch input   |
| 84      | SORCE                       | I   | Select signal input of signal input (analog/digital input) (Not used in this set)   |
| 85      | LOCK                        | O   | Output of CLV lock condition when test mode (Normally, open)  |
| 86      | HSTX                        | —   | Hardware standby input (Connect to SYSRST in this set)  |
| 87      | MD2                         | —   | CPU operation mode designation input (Connect to ground pin in this set)  |
| 88, 89  | MD1, 0                      | —   | CPU operation mode designation input (Fixed at “H” in this set)   |
| 90      | RSTX                        | —   | Reset input (Fixed at “H” in this set)  |
| 91      | VSS                         | —   | Ground pin  |
| 92      | X0                          | I   | Main clock oscillation input (3.68 MHz)   |
| 93      | X1                          | O   | Main clock oscillation output (3.68 MHz)  |
| 94      | VCC                         | —   | Power supply pin (+5 V)   |
| 95, 96  | NC                          | —   | Not used (Open)   |
| 97      | RAMBU                       | I   | RAM backup detection input  |
| 98, 99  | NC                          | —   | Not used (Open)   |
| 100     | MD/REC-ON                   | O   | Power control output for overlight head   |
| 101     | RF-ON                       | O   | Power control output for RF AMP   |
| 102     | REC-P                       | I   | Detection signal input from REC position detection switch (“L”: REC position)   |
| 103     | PLAY-P                      | I   | Detection signal input from PLAY position detection switch (“L”: PLAY position)   |
| 104     | PROTECT                     | I   | Recording prevention claw detection input from write protect detection switch (“H”: Write Protect)                          |
| 105     | REFLECT                     | I   | Desk reflectance detection input from reflect detection switch (“H”: Low reflectance disk IN)                               |
| 106     | PACK-IN                     | I   | PACK-IN (LOADING END SENSOR) sensor input of MD mechanism deck  |
| 107     | NC                          | —   | Not used (Open)   |
| 108     | REC/PLAY                    | I   | Change select input on recording mechanism deck and playing mechanism deck (“H”: REC, “L”: PLAY) (Fixed at “H” in this set) |
| 109     | DFCTSEL                     | I   | Select input on used of DEFECT2 function (Not used in this set (Fixed at “H”))  |
| 110     | WRPWR                       | O   | Laser power select signal output to optical pick-up or CXD2652AR (“L”: READ POWER, “H”: WRITE POWER)                        |
| 111     | PREHEAT                     | O   | Preheat control output (“H”: Preheat ON)  |
| 112     | $\overline{\text{MDRST}}$   | O   | Reset output to MD servo IC   |



| Pin No.   | Pin Name | I/O | Pin Description                     |
|-----------|----------|-----|-------------------------------------|
| 113       | MDLAT    | O   | Latch output to MD servo IC         |
| 114       | SERVO-ON | O   | Power control output to MD servo IC |
| 115 – 118 | MNT3 – 0 | I   | Monitor 3 – 0 input of CXD2652AR    |
| 119       | VSS      | —   | Ground pin                          |
| 120       | SENS     | I   | Sens input from MD servo IC         |



• IC650 HD64F2357F (DISPLAY CONTROL)

| Pin No. | Pin Name            | I/O | Pin Description   |
|---------|---------------------|-----|---|
| 1, 2    | PG3, 4              | O   | Not used in this set (Open)   |
| 3       | VSS                 | —   | Ground pin  |
| 4       | NC                  | —   | Not used in this set (Open)   |
| 5       | VCC                 | —   | Power supply pin (+5 V)   |
| 6 – 9   | PC0 – 3             | O   | Not used in this set (Open)   |
| 10      | VSS                 | —   | Ground pin  |
| 11 – 14 | PC4 – 7             | O   | Not used in this set (Open)   |
| 15 – 18 | PB0 – 3             | O   | Not used in this set (Open)   |
| 19      | VSS                 | —   | Ground pin  |
| 20 – 23 | PB4 – 7             | O   | Not used in this set (Open)   |
| 24      | PA0                 | O   | Signal out select control output to the IC652 (BA3834F)             |
| 25      | PA1                 | O   | Signal out select control output to the IC652 (BA3834F)             |
| 26      | PA2                 | O   | Signal out select control output to the IC652 (BA3834F)             |
| 27      | PA3                 | O   | Signal out select control output to the IC652 (BA3834F)             |
| 28      | VSS                 | —   | Ground pin  |
| 29 – 32 | PA4/IRQ4 – PA7/IRQ7 | O   | Not used in this set (Open)   |
| 33      | SP LAT              | I   | Not used in this set (Open)   |
| 34      | P66/IRQ2            | I   | Not used in this set (Open)   |
| 35, 36  | VSS                 | —   | Ground pin  |
| 37      | P65/IRQ1            | O   | Not used in this set (Open)   |
| 38      | BUS ON              | I   | SONY BUS on input “L”: Active                                       |
| 39      | VCC                 | —   | Power supply pin (+5 V)   |
| 40      | CD/MD               | O   | Not used in this set (Open)   |
| 41 – 43 | PE1 – 3             | O   | Not used in this set (Open)   |
| 44      | VSS                 | —   | Ground pin  |
| 45      | TIR IND             | O   | Not used in this set (Open)   |
| 46, 47  | PE 5, 6             | O   | Not used in this set (Open)   |
| 48      | MD LOCK             | O   | Not used in this set (Open)   |
| 49      | BU IN               | I   | Backup power supply detection input “H”: Back up                    |
| 50      | LINK OFF            | O   | Link off output   |
| 51      | PD2                 | O   | Not used in this set (Open)   |
| 52      | ILL ON              | O   | Illumination power supply control output                            |
| 53      | VSS                 | —   | Ground pin  |
| 54, 55  | NCO                 | O   | Not used in this set (Open)   |
| 56      | PD6                 | O   | Not used in this set (Open)   |
| 57      | BOOT                | I   | Display microcomputer write control input                           |
| 58      | VCC                 | —   | Power supply pin (+5 V)   |
| 59      | NC                  | —   | Not used in this set (Open)   |
| 60      | TX/LCDDATA          | O   | LCD driver serial data output/Flash microcomputer write data output |
| 61      | SP SI               | I   | DSP serial data input   |
| 62      | RX/DOOR SW          | I   | Flash microcomputer write data input/Door detection input           |
| 63      | SP SCK              | I   | Not used in this set (Open)   |
| 64      | LCD CLK             | O   | LCD driver serial clock output                                      |
| 65      | VSS                 | —   | Ground pin  |
| 66      | LCD CEO             | O   | LCD chip enable signal output                                       |
| 67, 68  | VSS                 | —   | Ground pin  |
| 69      | LCDINH              | O   | Not used in this set (Open)   |
| 70      | LCDCEI              | O   | LCD chip enable signal output                                       |
| 71      | P63                 | O   | Not used in this set (Open)   |
| 72 – 78 | P27 – 21            | O   | Not used in this set (Open)   |
| 79      | FL W                | O   | Flash write control output  |
| 80      | FWE (L)             | O   | Flash write enable input  |



| Pin No.   | Pin Name          | I/O | Pin Description  |
|-----------|-------------------|-----|--|
| 81        | RES               | I   | System reset input   |
| 82        | NMI (H)           | I   | Non-maskable interruption input (Connect to pin ④9 (BU IN).) |
| 83        | STBY (H)          | I   | Hardware standby input “H”: Not used                         |
| 84        | VCC               | —   | Power supply pin (+5 V)                                      |
| 85        | XTAL              | O   | Crystal oscillation output (18.432 MHz)                      |
| 86        | EXTAL             | I   | Crystal oscillation input (18.432 MHz)                       |
| 87        | VSS               | —   | Ground pin   |
| 88        | PF7               | O   | Not used in this set (Open)                                  |
| 89        | VCC               | —   | Power supply pin (+5 V)                                      |
| 90 – 96   | PF6 – 0           | O   | Not used in this set (Open)                                  |
| 97        | UNI-SO            | O   | SONY BUS system serial data output                           |
| 98        | UNI-SI            | I   | SONY BUS system serial data input                            |
| 99, 100   | VSS               | —   | Ground pin   |
| 101       | UNI-SCK           | I   | SONY BUS system serial clock input                           |
| 102       | P53/ADTRG         | O   | Not used in this set (Open)                                  |
| 103       | AVCC              | —   | Power supply pin (+5 V) of analog macro (D/A, A/D etc.)      |
| 104       | VREF              | —   | A/D, D/A converter reference voltage pin (+5 V)              |
| 105       | P40/AN0           | I   | Peak hold voltage detection input from the IC652 (BA3834F)   |
| 106 – 110 | P41/AN0 – P45/AN5 | I   | Not used in this set (Connect to ground in this set)         |
| 111       | P46/AN6/DA0       | I   | Not used in this set (Connect to ground in this set)         |
| 112       | P47/AN7/DA1       | I   | Not used in this set (Connect to ground in this set)         |
| 113       | AVSS              | —   | Ground pin   |
| 114       | VSS               | —   | Ground pin   |
| 115 – 122 | P17 – P10         | O   | Not used in this set (Open)                                  |
| 123 – 125 | MD0 – 2 (H)       | I   | Operation mode setting input (Fixed at “H” in this set)      |
| 126 – 128 | PG0 – 2           | O   | Not used in this set (Open)                                  |



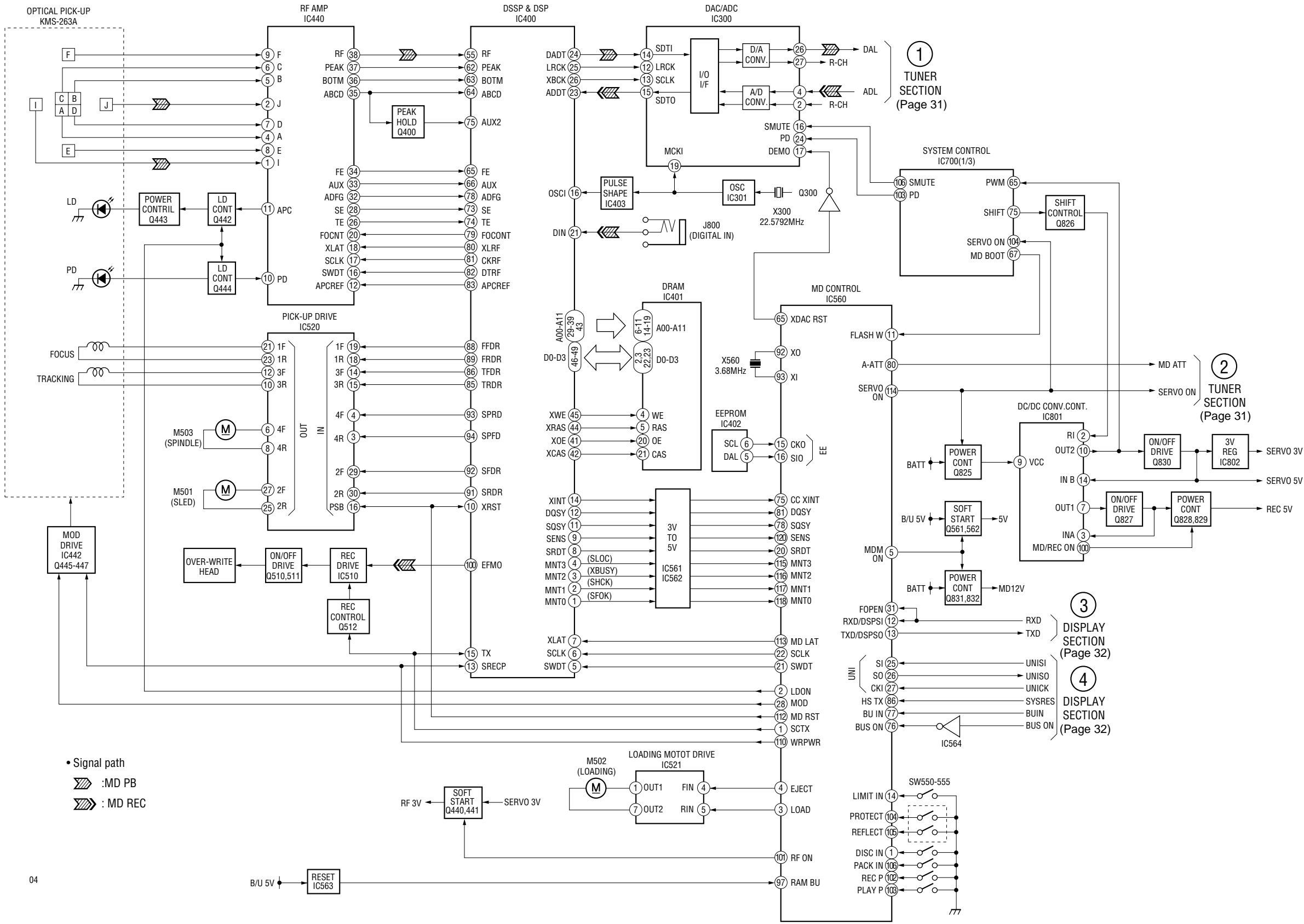
• IC700 MB90574PMT-G-259-BND (SYSTEM CONTROL)

| Pin No. | Pin Name    | I/O | Pin Description  |
|---------|-------------|-----|--|
| 1       | TUN ON      | O   | Tuner power control output (TU +5.6 V)   |
| 2       | SET UP      | O   | Not used in this set (Open)  |
| 3       | FM ON       | O   | Not used in this set (Open)  |
| 4       | AM ON       | O   | Not used in this set (Open)  |
| 5       | N.C.O       | O   | Not used in this set (Open)  |
| 6       | SYS RESET   | O   | SONY BUS system reset output (SONY BUS interface to CD, external control)                |
| 7       | BUS ON      | O   | SONY BUS on control output (SONY BUS interface to CD, external control)                  |
| 8       | VCC         | —   | +5 V power supply pin  |
| 9       | FLS PON     | O   | Flash drive power control output (ILL ON power supply)<br>“H” is output when flash read. |
| 10      | EEDATA      | O   | EEPROM data output   |
| 11      | EECLK       | O   | EEPROM CLK output  |
| 12      | DOOR SW/RXD | I   | Door open/close detection input “L”: close, “H”: open                                    |
| 13      | TXD         | O   | Serial data output   |
| 14      | N.C.O       | O   | Not used in this set (Open)  |
| 15      | BEEP        | O   | Beep output  |
| 16      | AMP MUTE    | O   | Power amplifier mute output  |
| 17 – 19 | N.C.O       | O   | Not used in this set (Open)  |
| 20      | UNI SI      | I   | SONY BUS serial data input (SONY BUS interface to CD, external control)                  |
| 21      | UNI SO      | O   | SONY BUS serial data output (SONY BUS interface to CD, external control)                 |
| 22      | UNI CLK     | I/O | SONY BUS serial clock input/output (SONY BUS interface to CD, external control)          |
| 23      | N.C.O       | O   | Not used in this set (Open)  |
| 24      | SIRCS       | I   | Remote commander (infrared rays reseiver) input  |
| 25 – 29 | N.C.O       | O   | Not used in this set (Open)  |
| 30      | SW SHIFT    | O   | Tuner switch shift output  |
| 31      | N.C.O       | O   | Not used in this set (Open)  |
| 32      | TUNER MUTE  | O   | Tuner mute control output (AM DET MUTE)  |
| 33      | VSS         | —   | Ground pin   |
| 34      | C           | —   | Capacitance connect pin of power supply stabilization                                    |
| 35      | AD ON       | O   | Power supply control output for AD conversion  |
| 36      | RDS ON      | O   | Power supply signal output to RDS (Not used in this set (Open))                          |
| 37      | N.C.O       | O   | Not used in this set (Open)  |
| 38      | DVCC        | —   | D/A converter VRER pin   |
| 39      | DVSS        | —   | D/A converter GND pin  |
| 40      | POWER ON    | O   | System power supply control output “L”: off, “H”: on                                     |
| 41      | N.C.O       | O   | Not used in this set (Open)  |
| 42      | AVCC        | —   | Analog power supply pin  |
| 43      | AVRH        | I   | A/D converter Vref (+) pin   |
| 44      | AVRL        | I   | A/D converter Vref (–) pin   |
| 45      | AVSS        | —   | Analog ground pin  |
| 46      | KEY IN0     | I   | Key signal input 0 (A/D analog input)  |
| 47      | KEY IN1     | I   | Key signal input 1 (A/D analog input)  |
| 48      | DSTSEL0     | I   | Initial setting input of destination   |
| 49      | RC IN0      | I   | Key input of rotary commander (A/D analog input)   |
| 50      | QUALITY     | I   | Noise detection input (A/D analog input)   |
| 51      | FM AGC      | I   | FM AGC detection input (A/D analog input)  |
| 52      | MPT         | I   | Multipath detection input (A/D analog input)   |
| 53      | VSM         | I   | Signal meter detection input (A/D analog input)  |
| 54      | VCC         | —   | +5 V power supply pin  |
| 55, 56  | N.C.O       | O   | Not used in this set (Open)  |
| 57      | E-VOL MOTE  | O   | Electron volume mute output  |
| 58      | N.C.O       | O   | Not used in this set (Open)  |

| Pin No.   | Pin Name   | I/O | Pin Description   |
|-----------|------------|-----|---|
| 59        | MUTE       | O   | LINE level mute output  |
| 60        | AMP ON     | O   | Power amplifier standby control output (to STNBY pin of power IC)                                     |
| 61        | N.C.O      | O   | Not used in this set (Open)   |
| 62        | FLASH WHT  | I   | Flash memory read mode detect input   |
| 63        | VSS        | —   | Ground pin  |
| 64        | RE IN0     | I   | Rotary encoder input 0  |
| 65        | PWM        | I   | D/D converter oscillator frequency signal input   |
| 66        | RE IN1     | I   | Rorary encoder input 1  |
| 67        | MD BOOT    | I   | Flash write select input  |
| 68        | N.C.O      | O   | Not used in this set (Open)   |
| 69        | RAM BU     | I   | RAM reset detection input   |
| 70        | II DATA    | I/O | I2C BUS serial data input/output (SONY BUS interface to tuner, electron volume, RDS.)                 |
| 71        | II CLK     | I/O | I2C BUS serial clock input/output (SONY BUS interface to tuner, electron volume, RDS.)                |
| 72        | RC IN1     | I   | Shift input of rotary commander   |
| 73        | X1A        | I   | Low speed oscillator connect pin (32,768 kHz)   |
| 74        | X0A        | O   |   |
| 75        | SHIFT      | O   | D/D converter frequency change signal output  |
| 76        | KEYACK     | I   | Key acknowledge input   |
| 77        | BU IN      | I   | Backup voltage detection input  |
| 78        | DAVN       | I   | Block synchronization detection input of RDS data   |
| 79        | TEL ATT    | I   | Telephone (TEL) detection input   |
| 80        | TEST IN    | I   | Test mode setting pin   |
| 81        | DP BOOT    | O   | Display microcomputer frash write setting output<br>“L” is output when write of display microcomputer |
| 82 – 84   | N.C.O      | O   | Not used in this set (Open)   |
| 85        | NS MASK    | O   | Noise mask output   |
| 86        | HSTX       | I   | Hardware standby input (This set connect to RSTX.)  |
| 87        | MD2        | I   | Input for operation mode (This set connect to VSS.)   |
| 88        | MD1        | I   | Input for operation mode (This set connect to VCC.)   |
| 89        | MD0        | I   | Input for operation mode (This set connect to VCC.)   |
| 90        | RSTX       | I   | Reset input   |
| 91        | VSS        | —   | Ground pin  |
| 92        | X0         | O   | High speed oscillator connect pin (3.6864 MHz)  |
| 93        | X1         | I   |   |
| 94        | VCC        | —   | +5 V power supply pin   |
| 95        | N.C.O      | O   | Not used in this set (Open)   |
| 96        | PARKING    | I   | Parking brake detection input “L”: packing condition  |
| 97        | N.C.O      | O   | Not used in this set (Open)   |
| 98        | SHIN       | O   | Not used in this set (Open)   |
| 99        | N.C.O      | O   | Not used in this set (Open)   |
| 100       | ILL IN     | I   | Illumination (ILL IN) detection input   |
| 101       | NOSE SW    | I   | Front panel attachment detection input “L”: on, “H”: off  |
| 102       | PACK IND   | O   | Door indicator output   |
| 103       | PD         | O   | Codec power supply control output   |
| 104       | SERVO-ON   | I   | Servo power supply control signal input from mechanism microcomputer “H”: on                          |
| 105       | ACC IN     | I   | Accessory power supply (ACC) detect input   |
| 106       | SMUTE      | O   | Codec mute signal output “H”: mute  |
| 107 – 118 | N.C.O      | O   | Not used in this set (Open)   |
| 119       | VSS        | —   | Ground pin  |
| 120       | LOW +B CHK | O   | Low battery check output  |

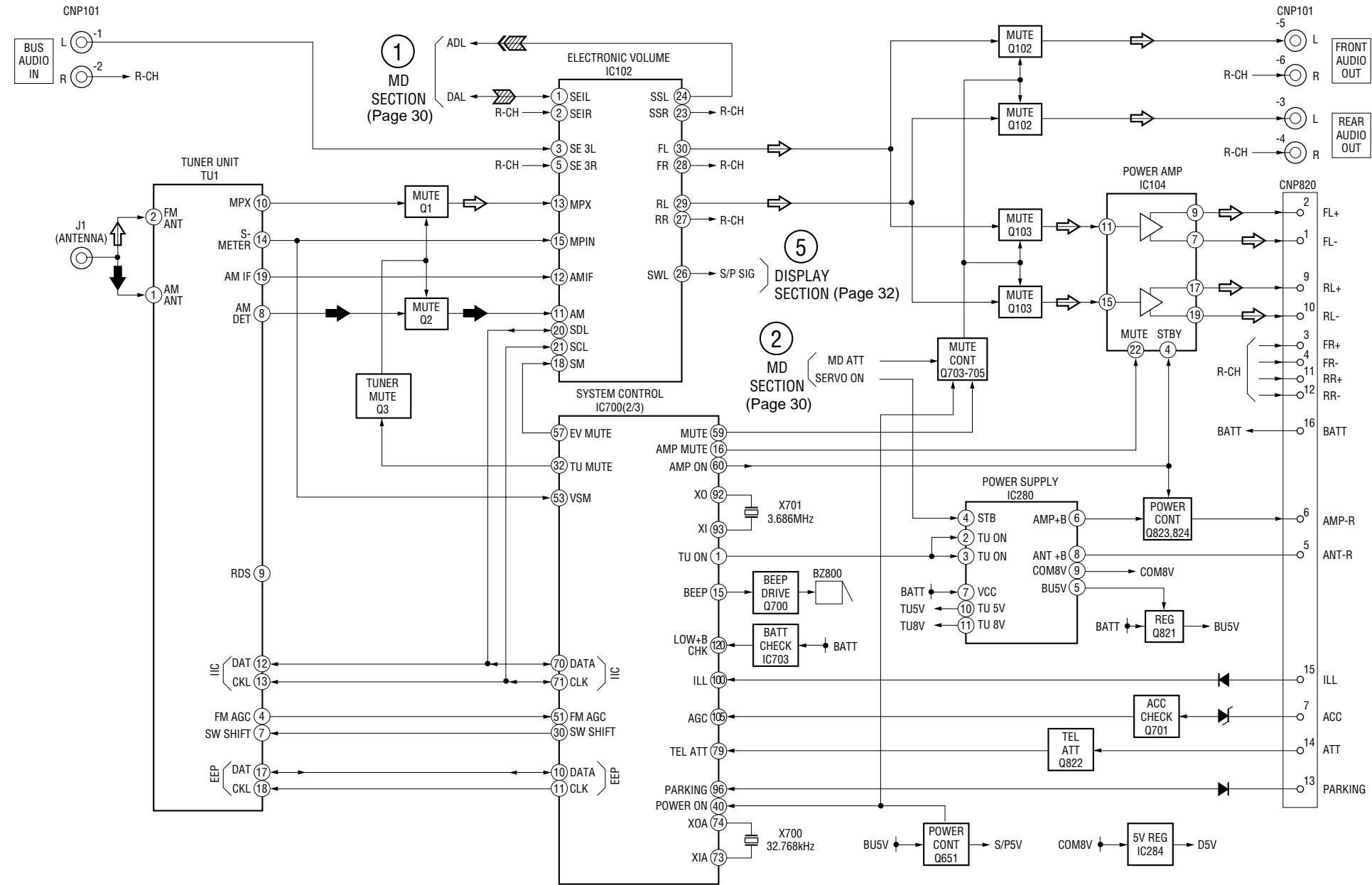


3-2. BLOCK DIAGRAM — MD SECTION —



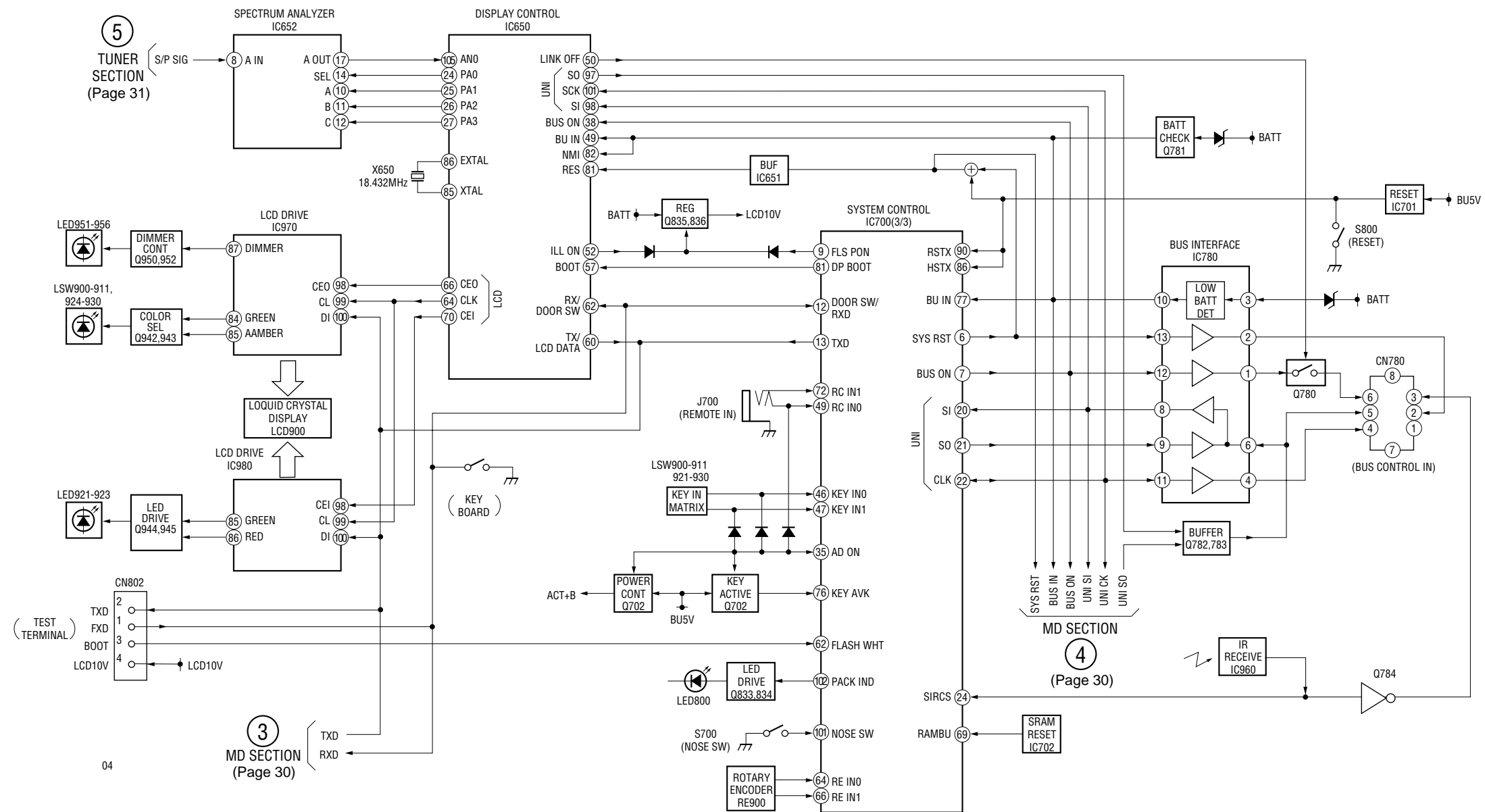


### 3-3. BLOCK DIAGRAM — TUNER SECTION —



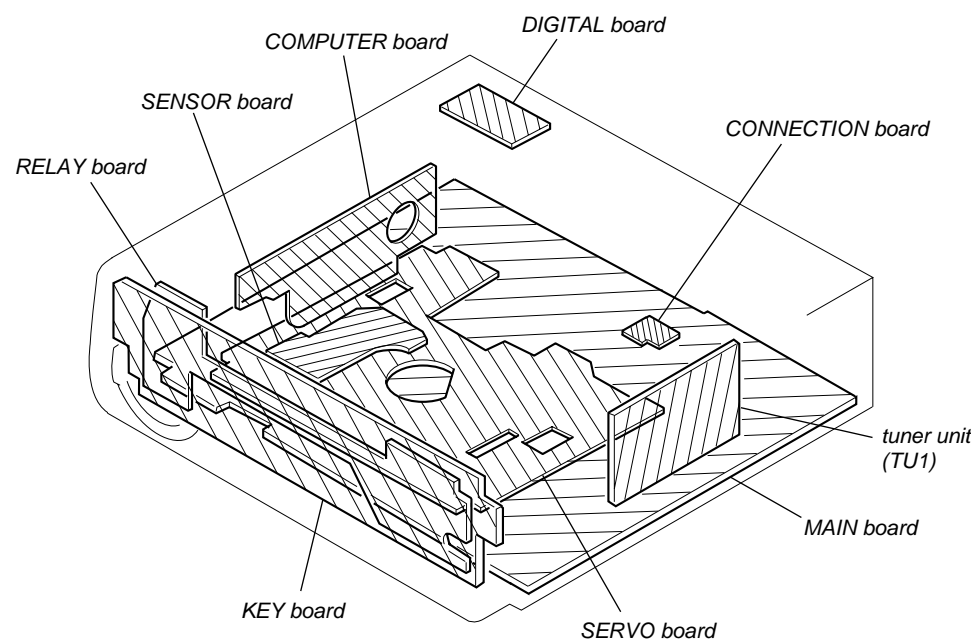


3-4. BLOCK DIAGRAM — DISPLAY SECTION —





3-5. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.  
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- % : indicates tolerance.
- $\Delta$  : internal component.
- $\square$  : panel designation.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

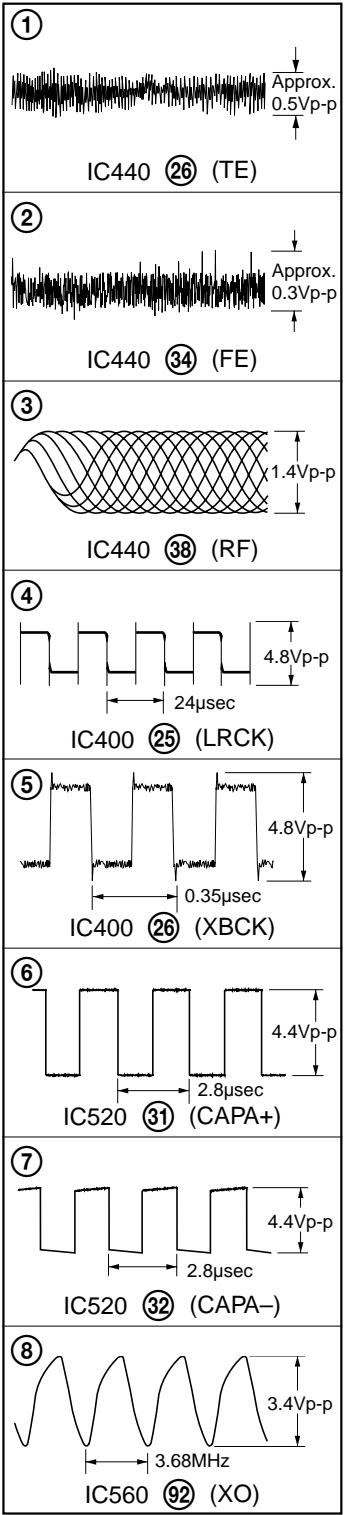
- $\boxed{\text{B}+}$  : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10  $\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - $\Rightarrow$  : FM
  - $\Rightarrow$  : AM
  - $\Rightarrow$  : MD

For printed wiring boards

- $\circ$  : parts extracted from the component side.
- $\square$  : parts extracted from the conductor side.
- $\circ$  : Through hole.
- $\Delta$  : internal component.
- $\square$  : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

**Caution:**  
Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.  
Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.

• Waveforms (MODE:PLAY)  
(SERVO/COMPUTER BLOCK)



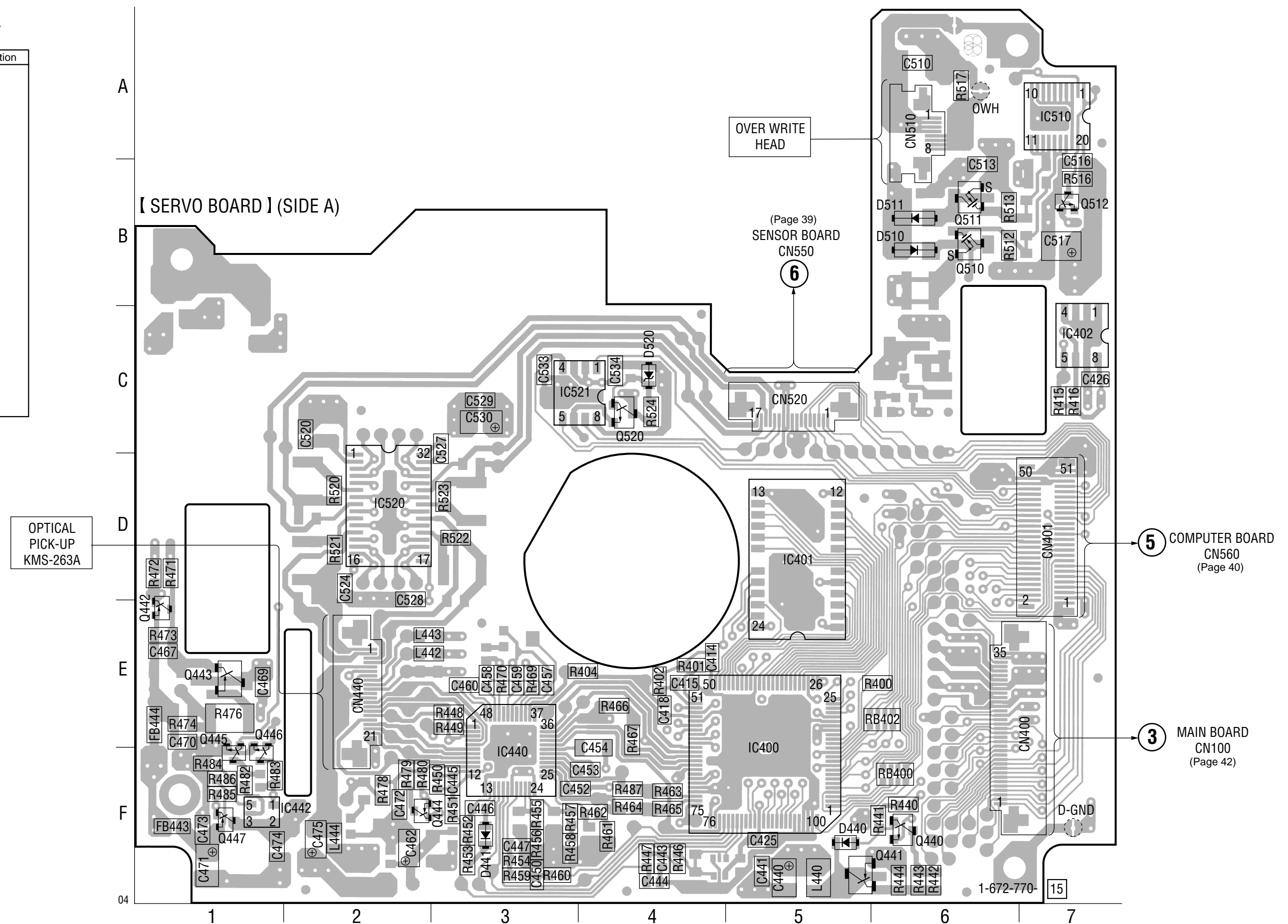


### 3-6. PRINTED WIRING BOARD — SERVO SECTION —

- **Semicon Location**

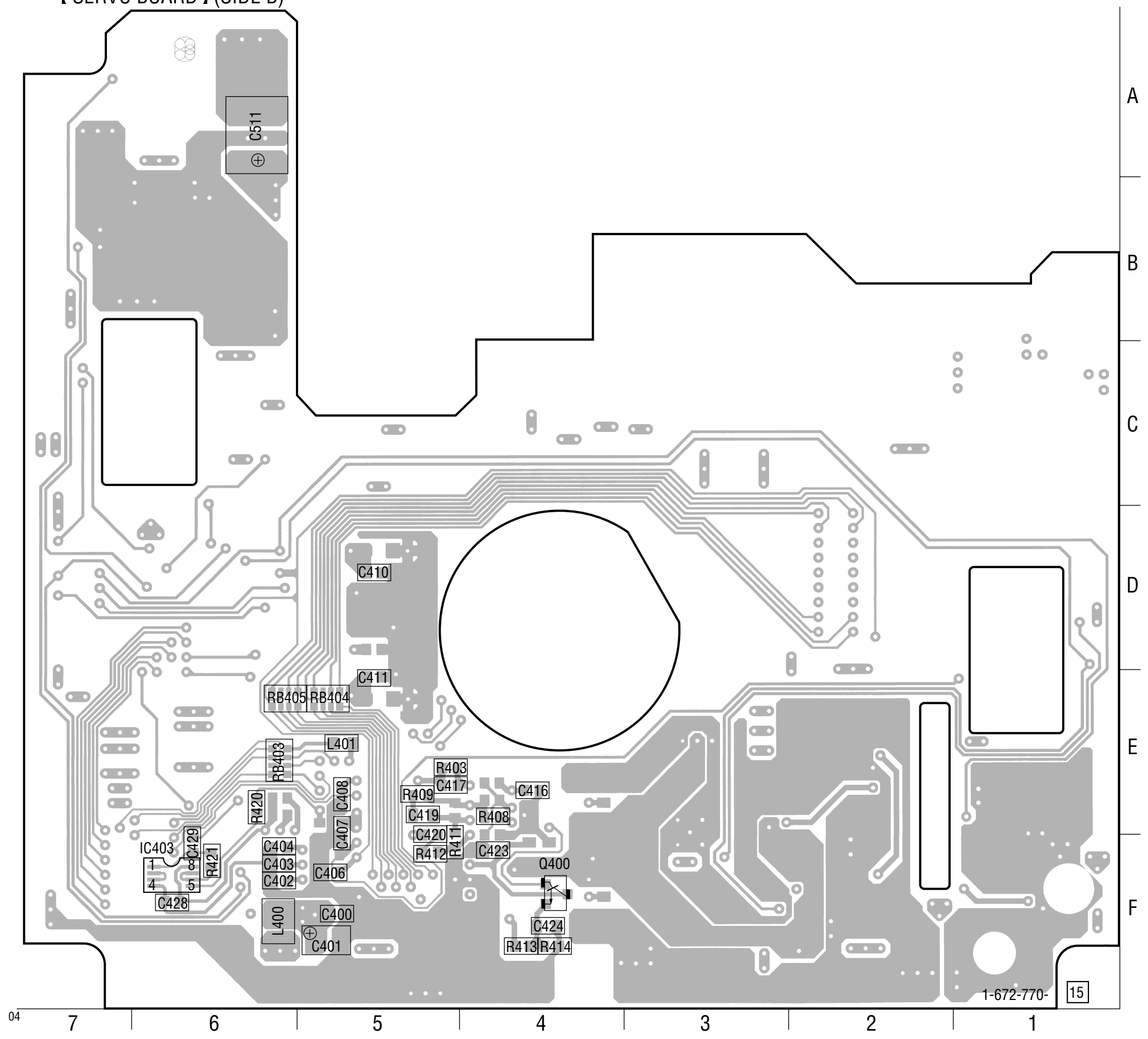
| Ref. No. | Location |
|----------|----------|
| D440     | F-5      |
| D441     | F-3      |
| D510     | B-6      |
| D511     | B-6      |
| D520     | C-4      |
| D521     | C-5      |
| IC400    | E-5      |
| IC401    | D-5      |
| IC402    | C-7      |
| (IC403)  | F-6      |
| IC440    | F-3      |
| IC442    | F-1      |
| IC510    | A-7      |
| IC520    | D-2      |
| (Q400)   | F-4      |
| Q440     | F-6      |
| Q441     | F-6      |
| Q442     | E-1      |
| Q443     | E-1      |
| Q444     | F-2      |
| Q445     | E-1      |
| Q446     | E-1      |
| Q447     | F-1      |
| Q510     | B-6      |
| Q511     | B-6      |
| Q512     | B-7      |
| Q520     | C-4      |

( ) : SIDE B





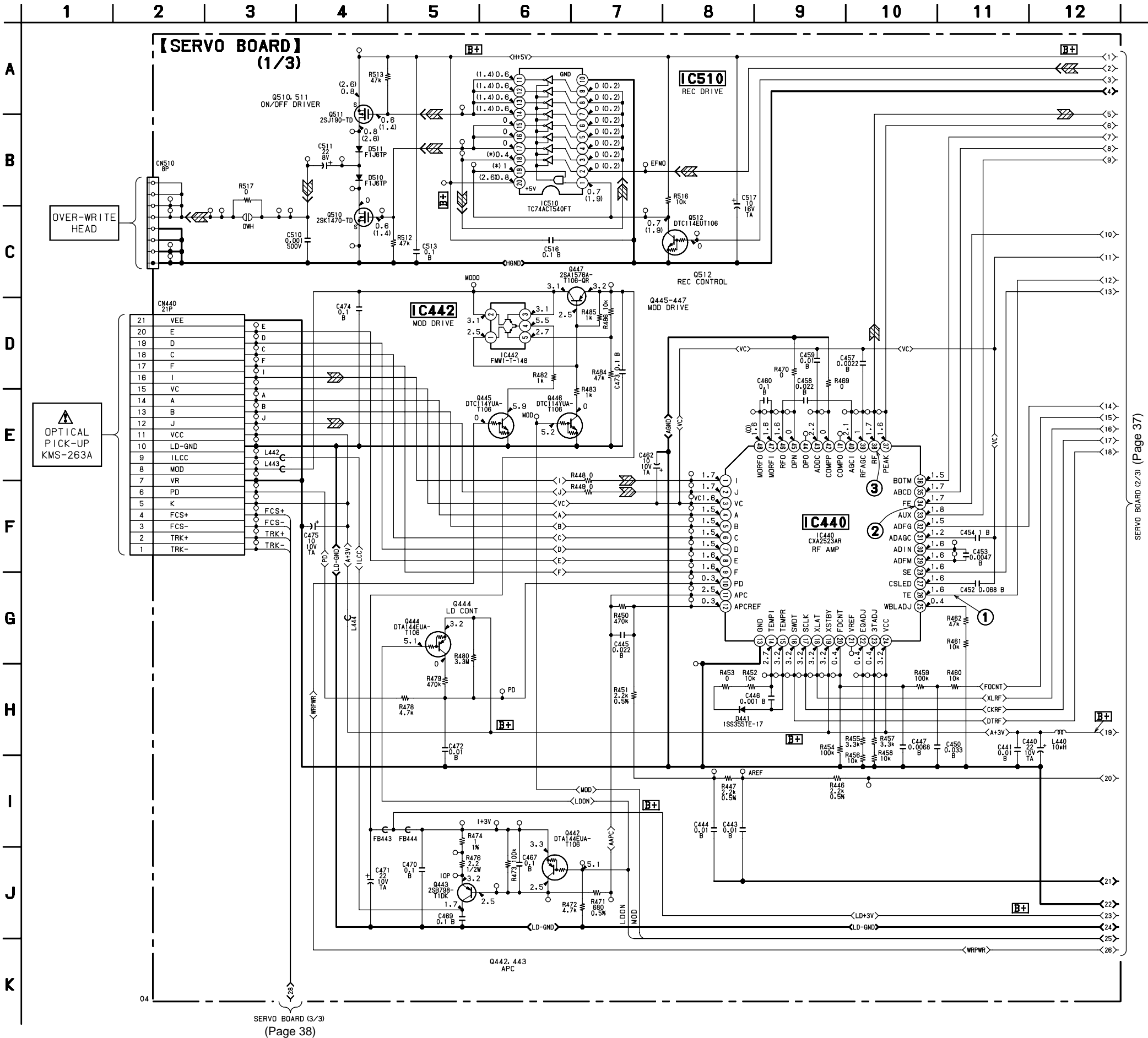
【 SERVO BOARD 】 (SIDE B)





- Refer to page 33 for Waveforms.

**3-7. SCHEMATIC DIAGRAM — SERVO SECTION (1/3) — • Refer to page 52 for IC Block Diagrams.**



**Note:**

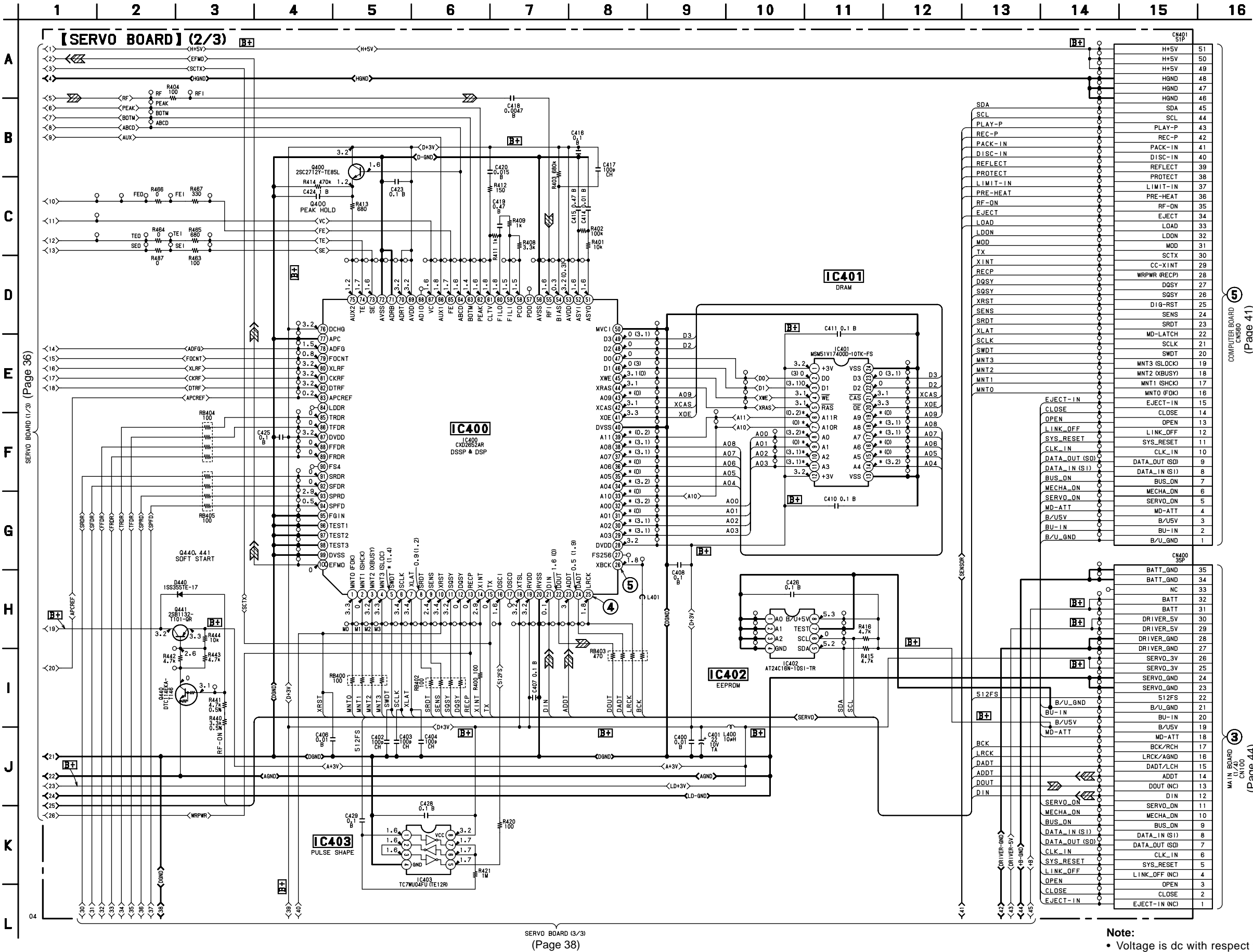
- Voltage is dc with respect to ground under no-signal condition.

no mark : MD PLAY  
(        ) : MD REC



• Refer to page 33 for Waveforms.

3-8. SCHEMATIC DIAGRAM — SERVO SECTION (2/3) — • Refer to page 52 for IC Block Diagrams.



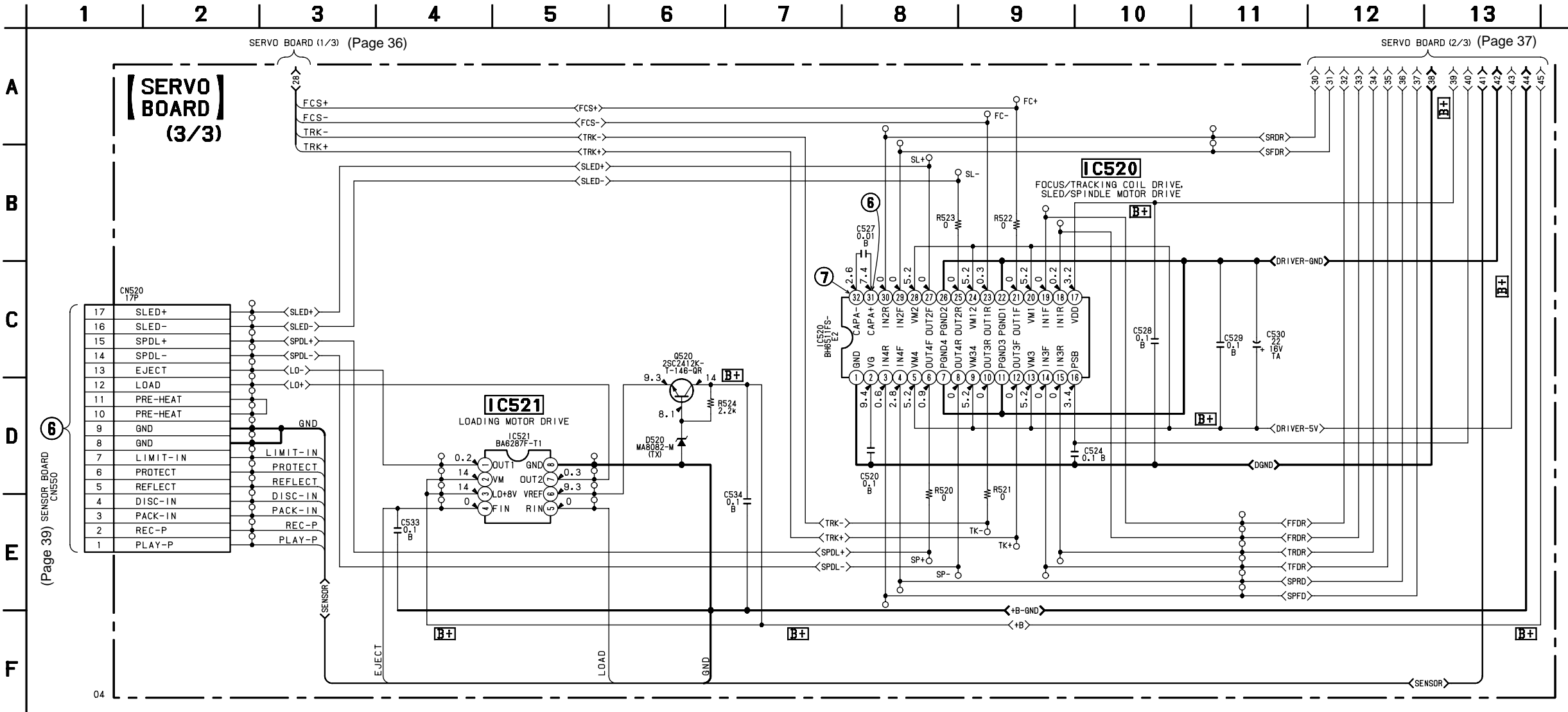
**Note:**

- Voltage is dc with respect to ground under no-signal condition.
- no mark : MD PLAY
- ( ) : MD REC
- \* : Impossible to measure



• Refer to page 33 for Waveforms.

3-9. SCHEMATIC DIAGRAM — SERVO SECTION (3/3) — • Refer to page 52 for IC Block Diagrams.

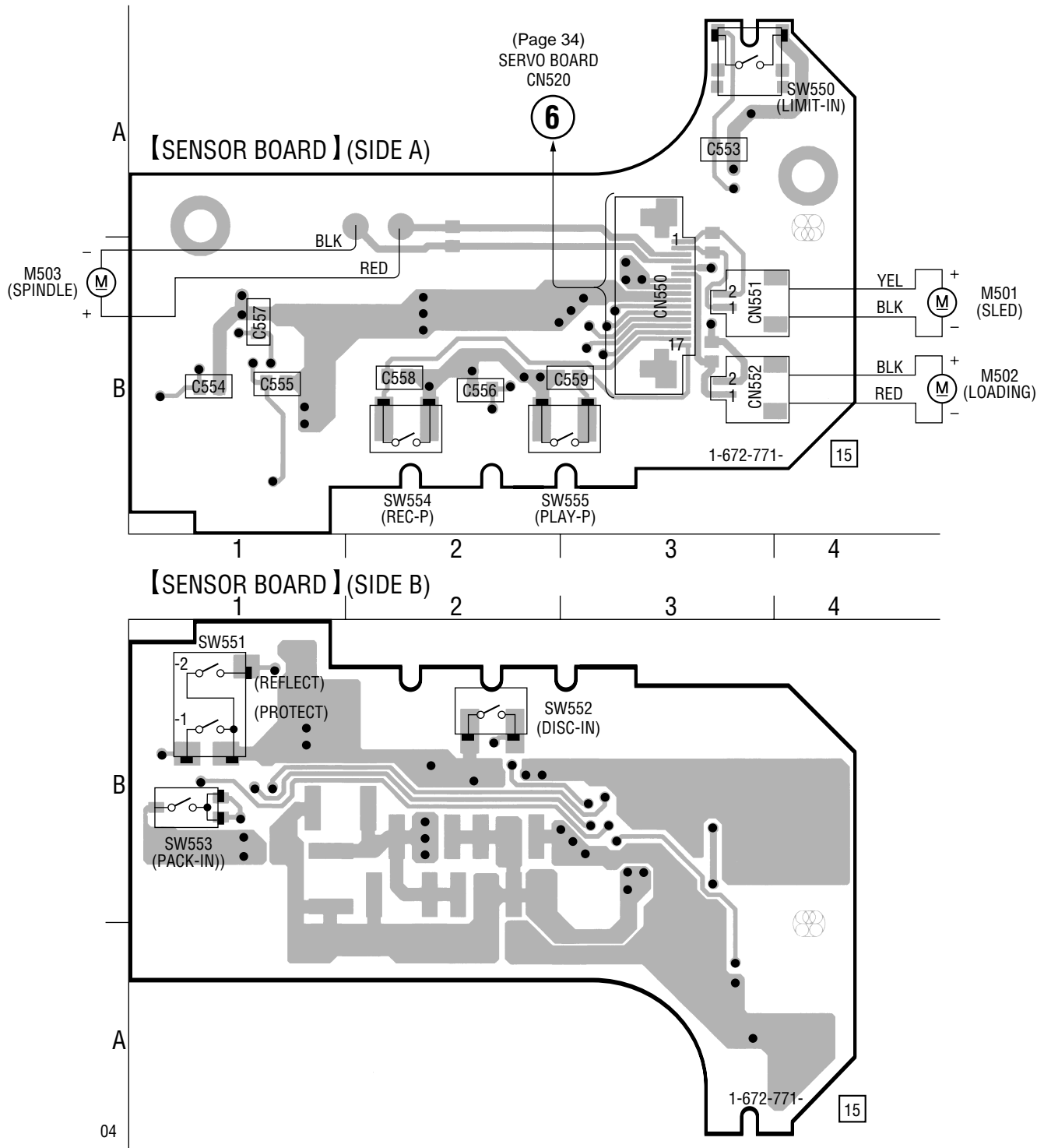


**Note:**

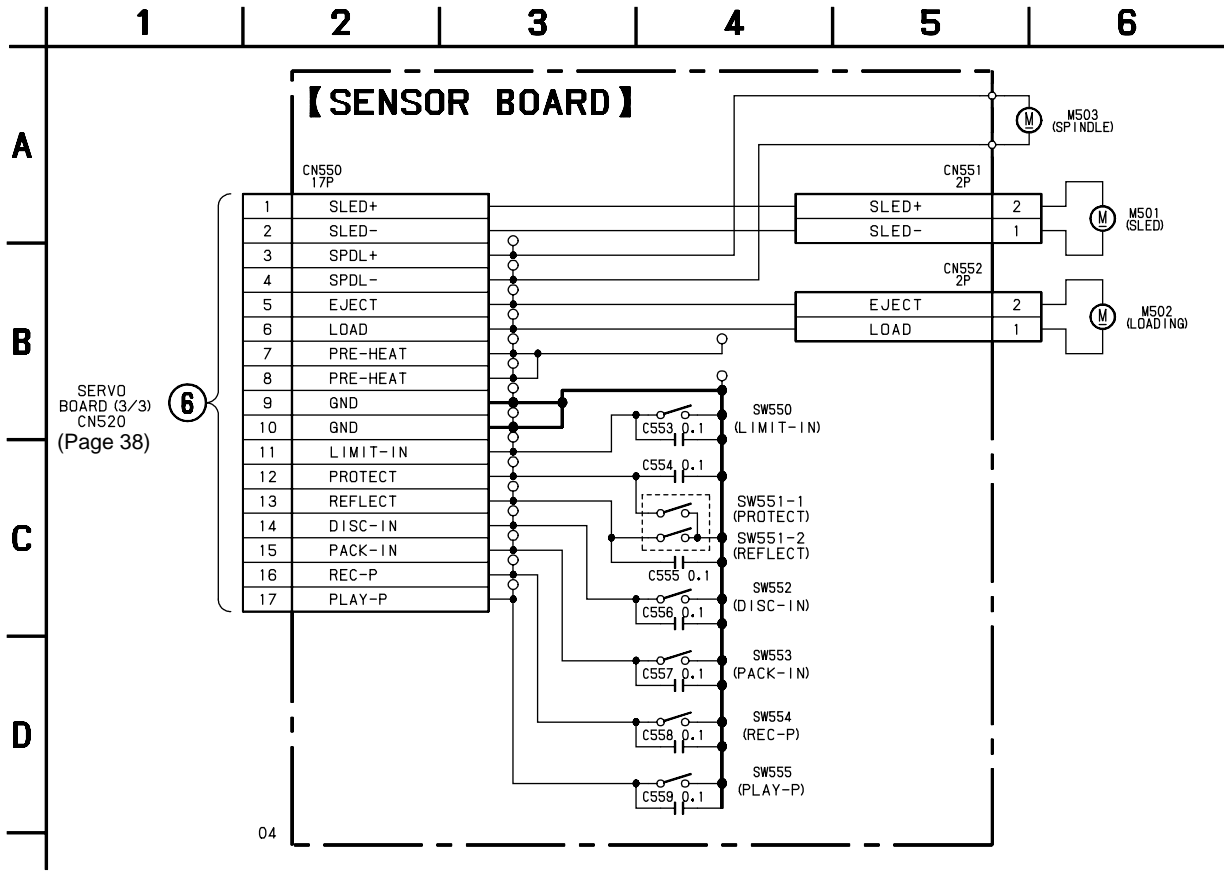
- Voltage is dc with respect to ground under no-signal condition.  
no mark : MD PLAY  
( ) : MD REC



3-10. PRINTED WIRING BOARD — SENSOR SECTION —



3-11. SCHEMATIC DIAGRAM — SENSOR SECTION —





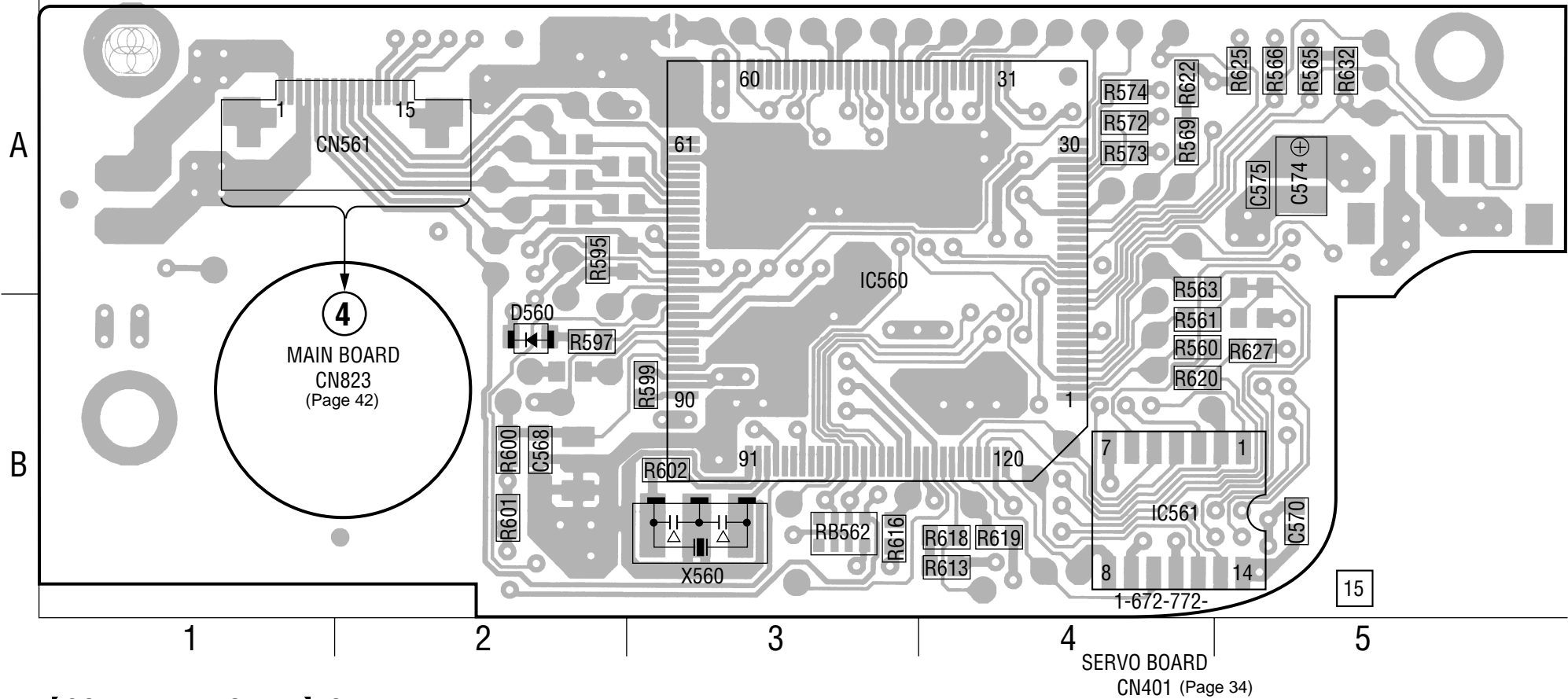
3-12. PRINTED WIRING BOARD — COMPUTER SECTION —

【COMPUTER BOARD】(SIDE A)

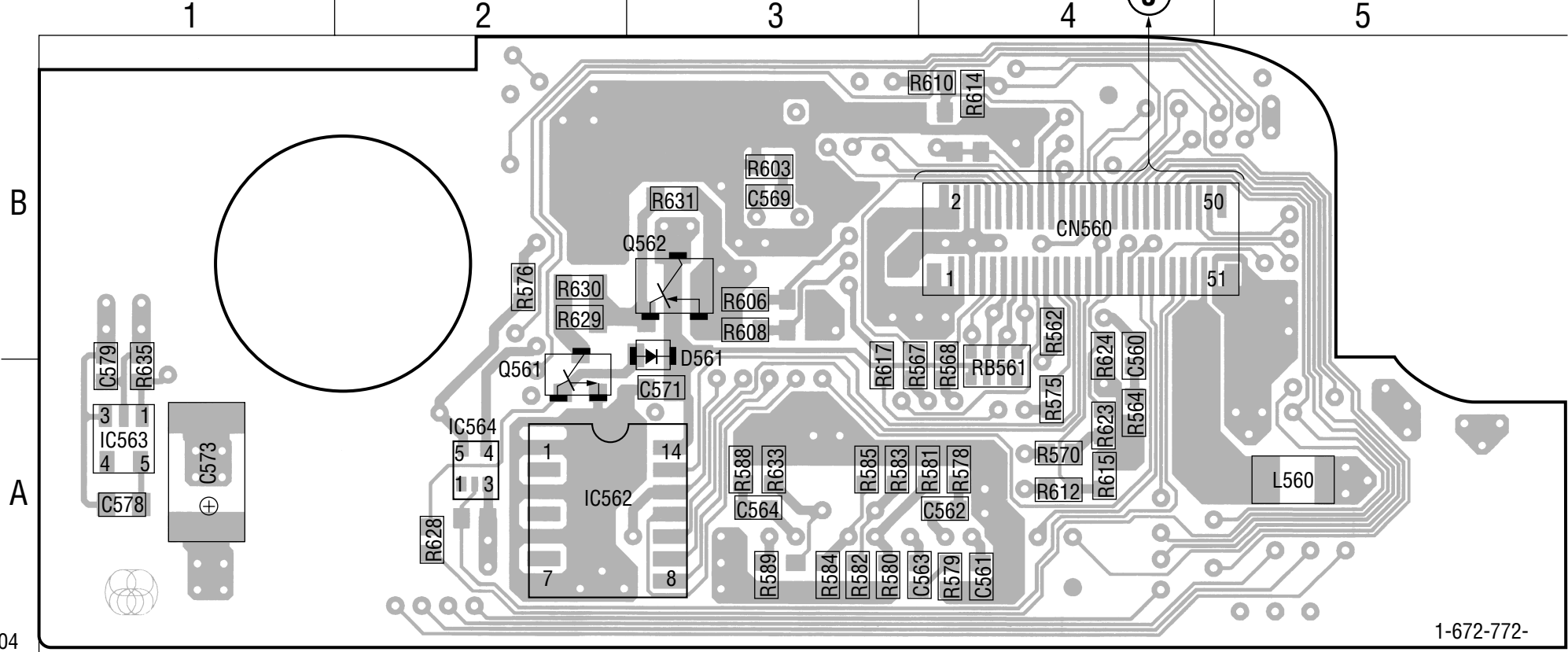
• Semiconductor Location

| Ref. No.    | Location   |
|-------------|------------|
| D560 (D561) | B-2<br>A-3 |
| IC560       | A-3        |
| IC561       | B-4        |
| (IC562)     | A-2        |
| (IC563)     | A-1        |
| (IC564)     | A-2        |
| (Q561)      | A-2        |
| (Q562)      | B-3        |

( ) : SIDE B



【COMPUTER BOARD】(SIDE B)





|  |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|

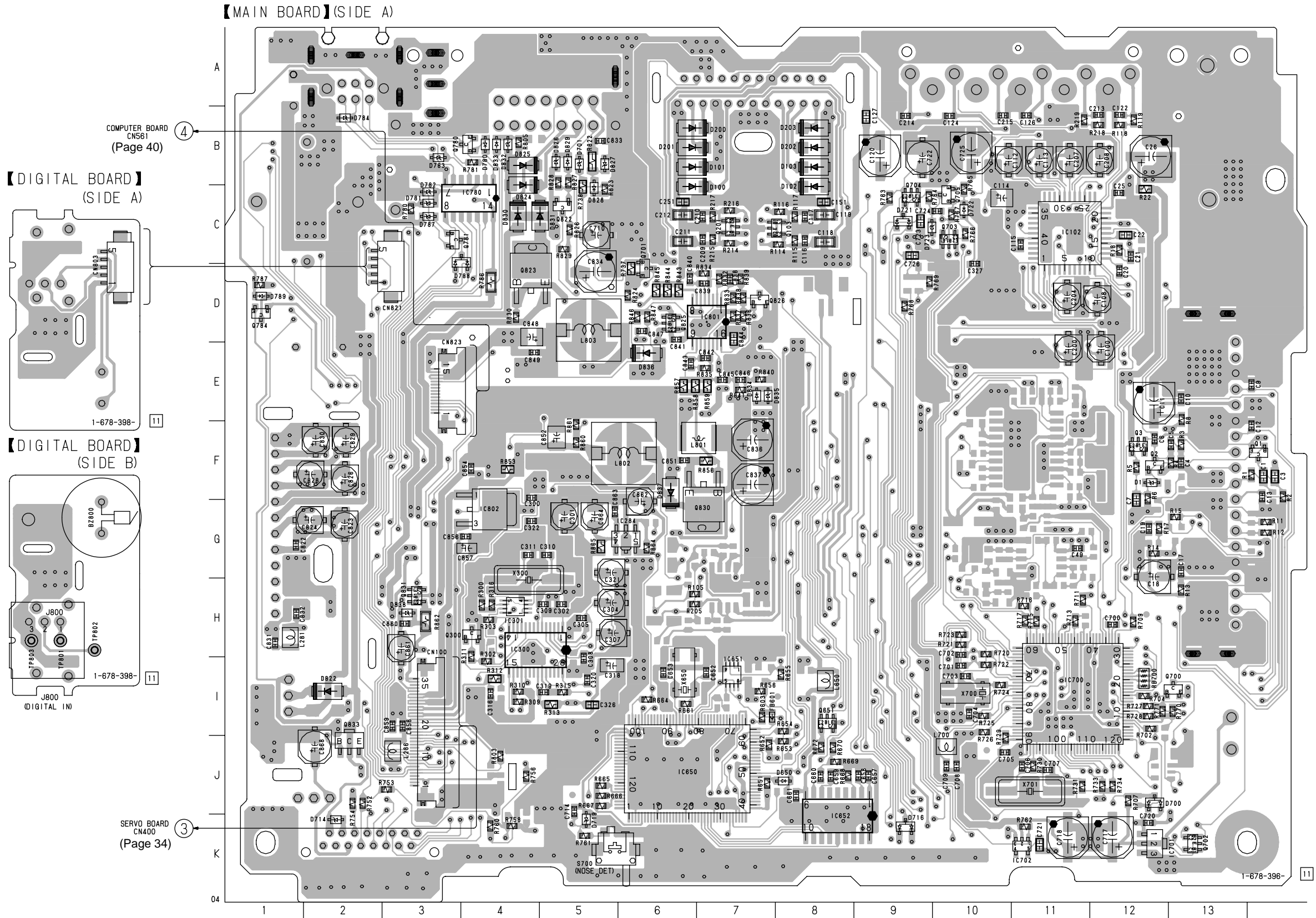




• Semiconductor  
Location (SIDE A)

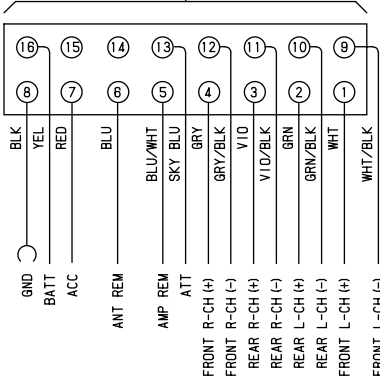
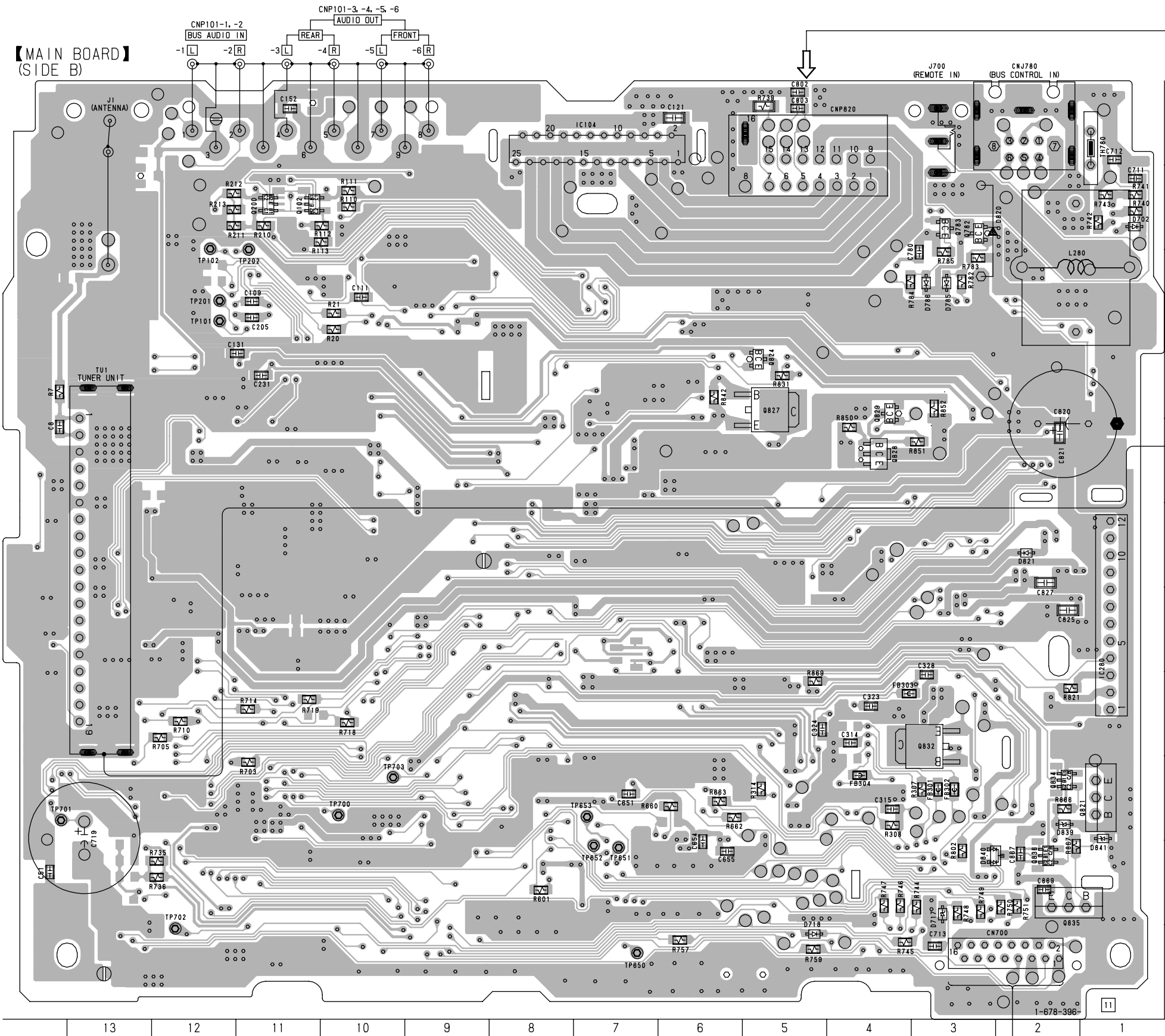
| Ref. No. | Location |
|----------|----------|
| D1       | F-12     |
| D100     | B-7      |
| D101     | B-7      |
| D102     | B-8      |
| D103     | B-8      |
| D200     | B-7      |
| D201     | B-6      |
| D202     | B-8      |
| D203     | B-8      |
| D650     | J-8      |
| D700     | J-13     |
| D701     | B-5      |
| D714     | K-2      |
| D716     | K-9      |
| D719     | K-5      |
| D721     | C-9      |
| D722     | C-10     |
| D723     | C-9      |
| D780     | B-4      |
| D781     | C-3      |
| D782     | C-3      |
| D783     | B-3      |
| D784     | B-2      |
| D787     | C-3      |
| D788     | D-4      |
| D789     | D-1      |
| D822     | I-2      |
| D824     | C-4      |
| D825     | B-4      |
| D826     | B-5      |
| D827     | B-5      |
| D828     | B-5      |
| D829     | B-5      |
| D830     | C-4      |
| D831     | C-5      |
| D832     | B-4      |
| D833     | B-4      |
| D834     | E-7      |
| D835     | E-7      |
| D836     | E-6      |
| D837     | F-6      |
| D838     | H-3      |
| IC102    | C-11     |
| IC284    | G-6      |
| IC300    | H-4      |
| IC301    | H-4      |
| IC650    | J-6      |
| IC651    | H-7      |
| IC652    | K-8      |
| IC700    | I-11     |
| IC701    | K-13     |
| IC702    | K-11     |
| IC780    | C-4      |
| IC801    | D-7      |
| IC802    | G-4      |
| Q1       | F-13     |
| Q2       | F-12     |
| Q3       | F-12     |
| Q103     | C-8      |
| Q201     | C-7      |
| Q300     | H-3      |
| Q651     | I-8      |
| Q700     | I-13     |
| Q701     | C-6      |
| Q702     | K-13     |
| Q703     | C-10     |
| Q704     | B-9      |
| Q705     | C-10     |
| Q780     | B-4      |
| Q781     | C-4      |
| Q784     | D-1      |
| Q822     | C-5      |
| Q823     | D-4      |
| Q825     | D-6      |
| Q826     | D-7      |
| Q830     | G-7      |
| Q831     | H-3      |
| Q833     | I-2      |

3-14. PRINTED WIRING BOARDS — MAIN SECTION —

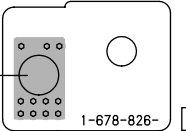




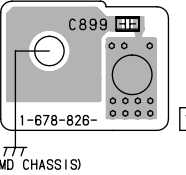
【MAIN BOARD】  
(SIDE B)



【CONNECTION BOARD】  
(SIDE B)



【CONNECTION BOARD】  
(SIDE A)



• Semiconductor  
Location (SIDE B)

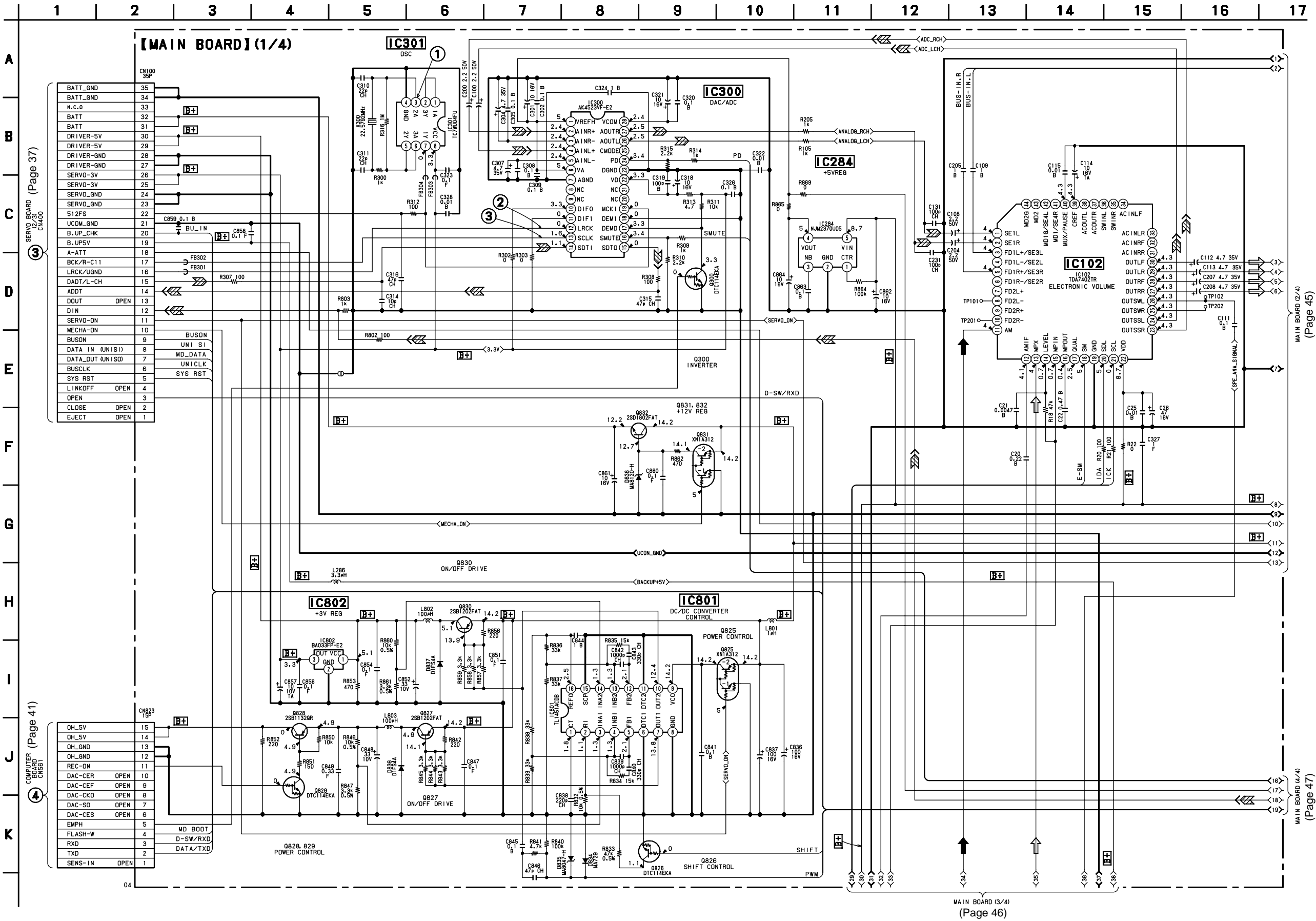
| Ref. No. | Location |
|----------|----------|
| D702     | B-1      |
| D717     | J-3      |
| D718     | K-5      |
| D785     | C-3      |
| D786     | C-3      |
| D820     | B-3      |
| D821     | F-2      |
| D839     | I-2      |
| D840     | J-3      |
| D841     | J-1      |
| IC104    | A-7      |
| IC280    | G-1      |
| Q102     | B-11     |
| Q200     | B-11     |
| Q782     | B-3      |
| Q783     | B-3      |
| Q821     | I-1      |
| Q824     | D-5      |
| Q827     | D-5      |
| Q828     | E-4      |
| Q829     | D-4      |
| Q832     | H-3      |
| Q834     | I-2      |
| Q835     | J-2      |
| Q836     | J-2      |

RELAY BOARD  
CN801  
(Page 48)



- Refer to page 49 for Waveforms.

**3-15. SCHEMATIC DIAGRAM — MAIN SECTION (1/4) — • Refer to page 52 for IC Block Diagrams.**

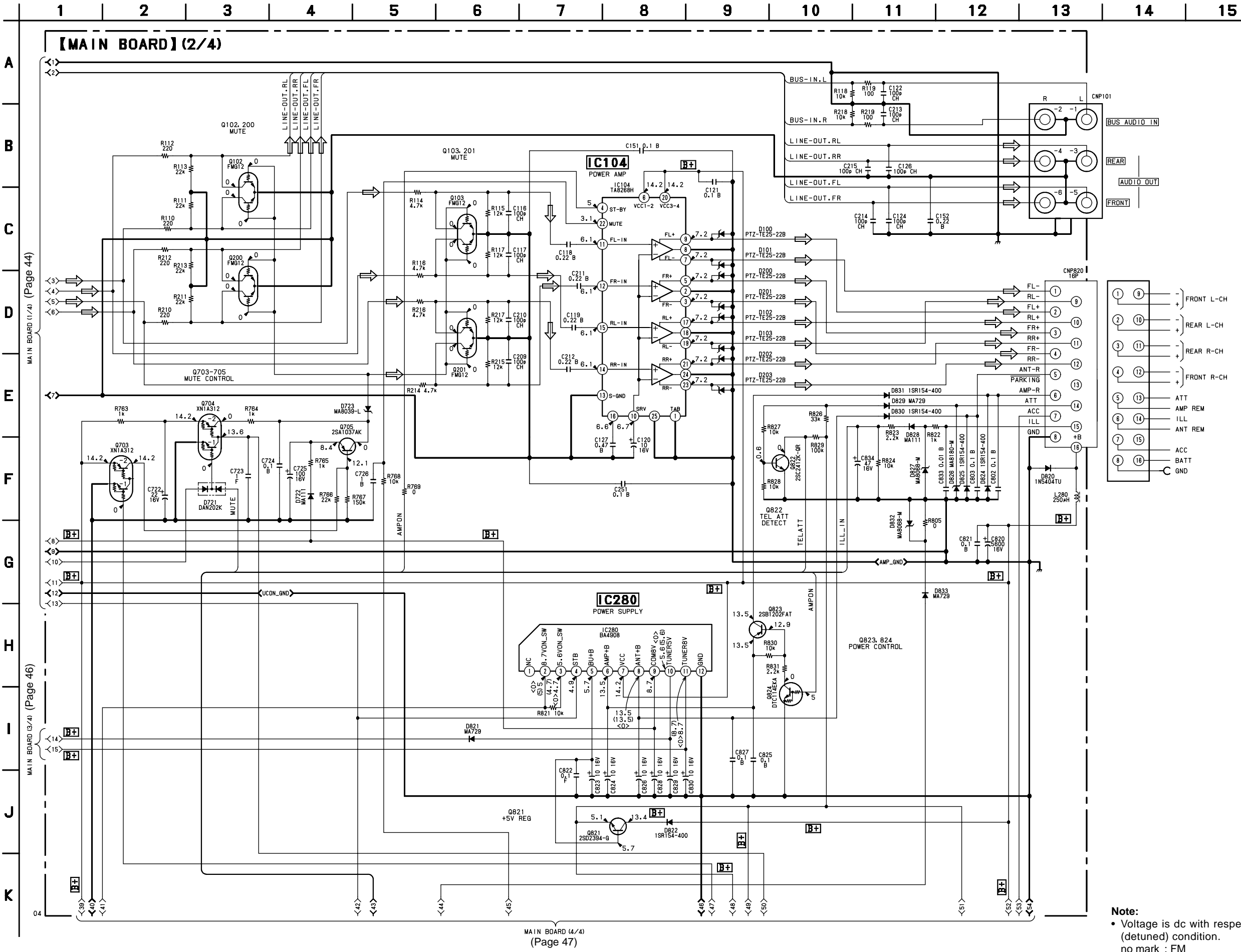


**Note:**

- Voltage is dc with respect to ground under no-signal (detuned) condition.  
no mark : FM



3-16. SCHEMATIC DIAGRAM — MAIN SECTION (2/4) — • Refer to page 52 for IC Block Diagrams.

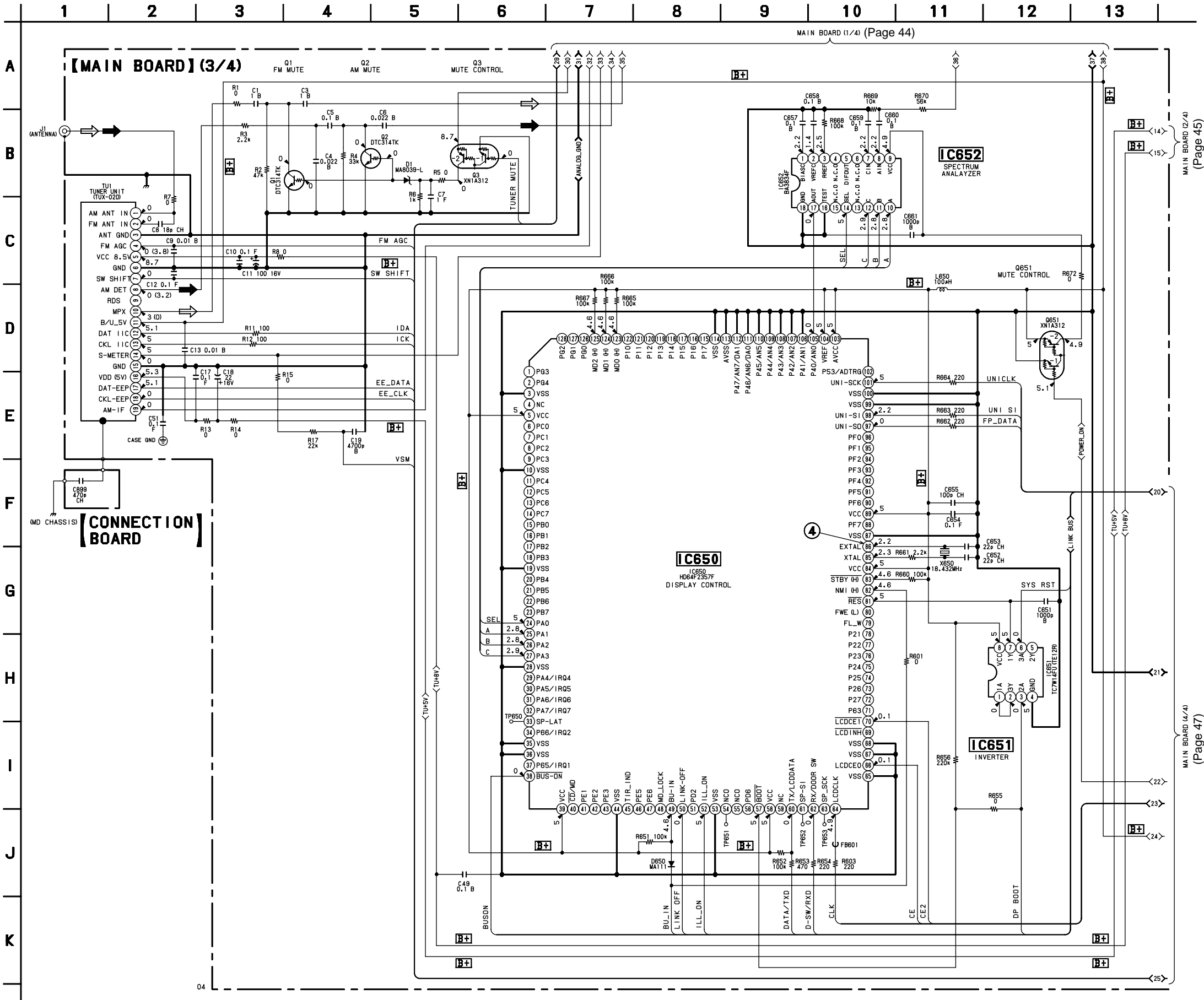


**Note:**  
• Voltage is dc with respect to ground under no-signal (detuned) condition.  
no mark : FM



• Refer to page 49 for Waveforms.

3-17. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) — • Refer to page 52 for IC Block Diagrams.

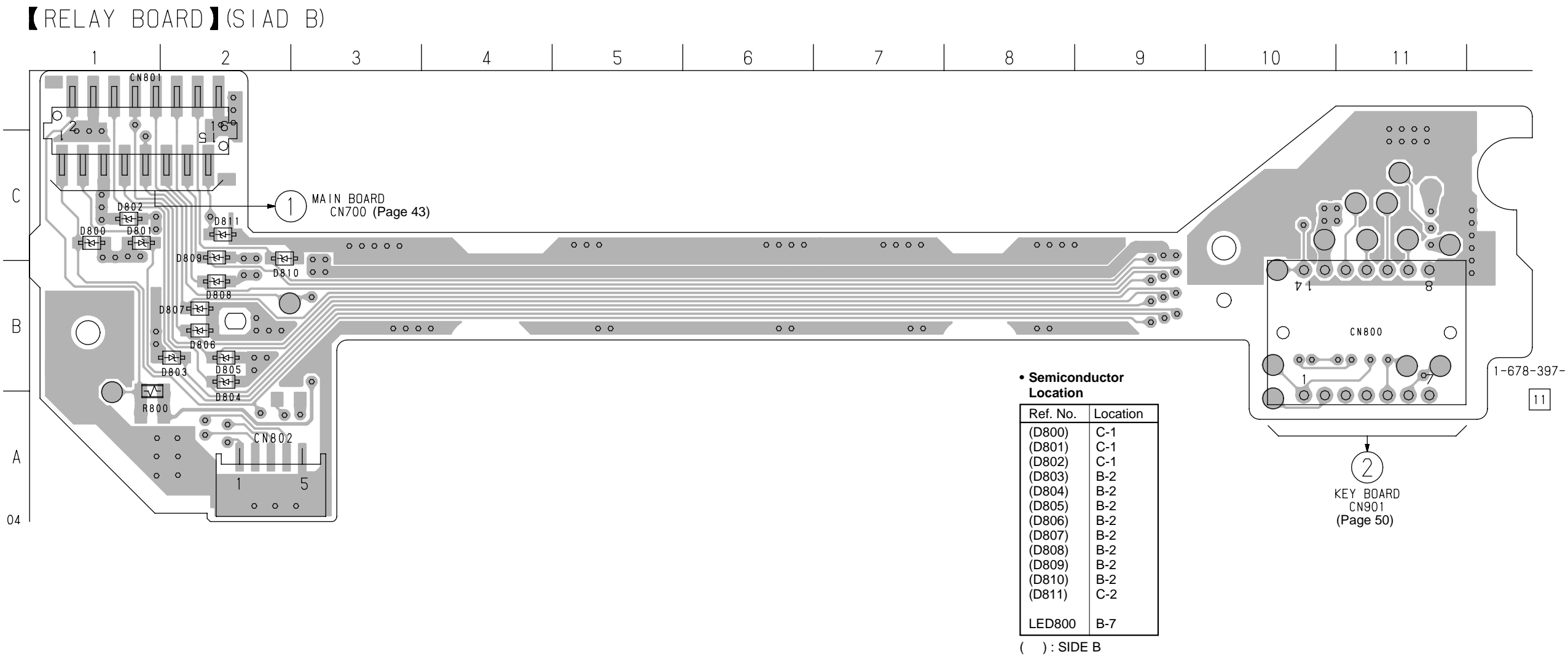
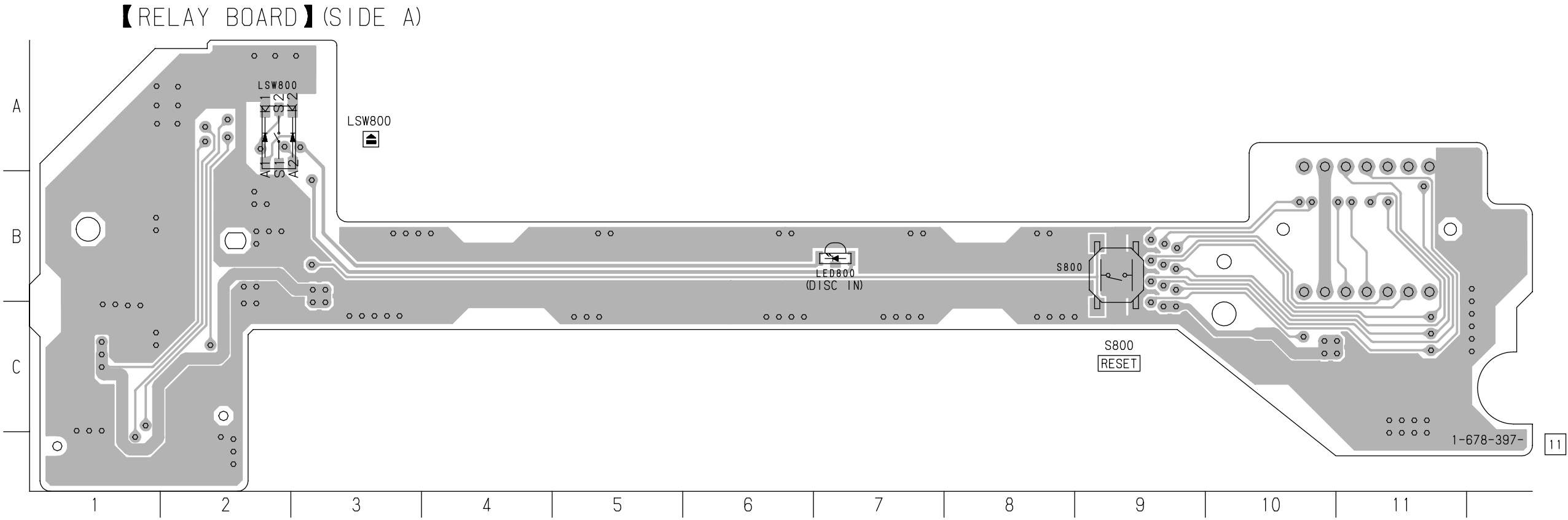






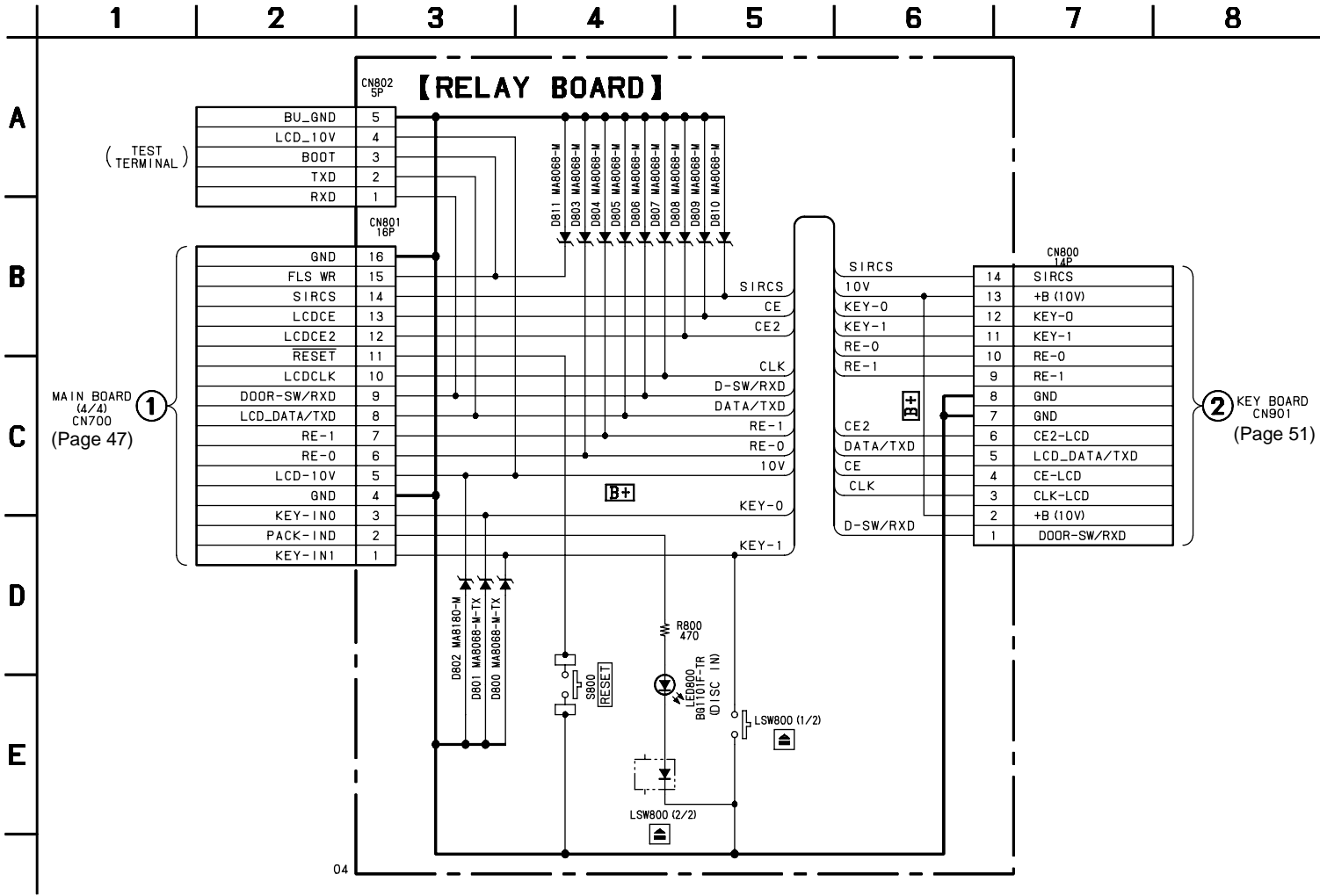


3-19. PRINTED WIRING BOARD — RELAY SECTION —

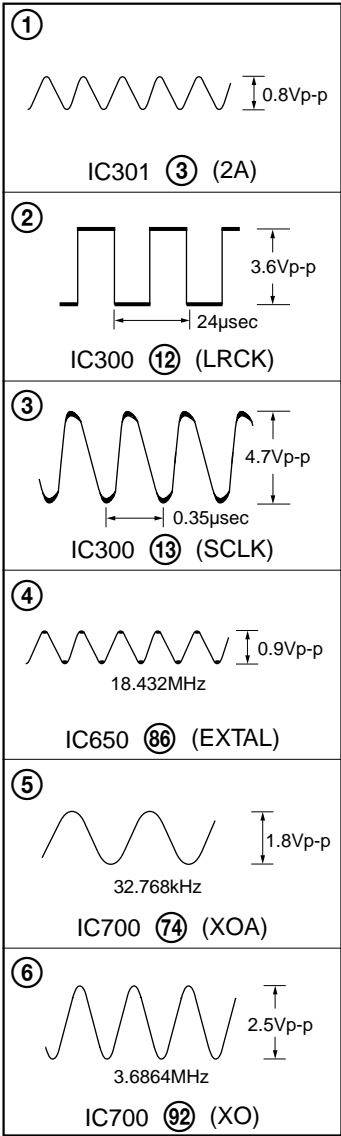




3-20. SCHEMATIC DIAGRAM — RELAY SECTION —

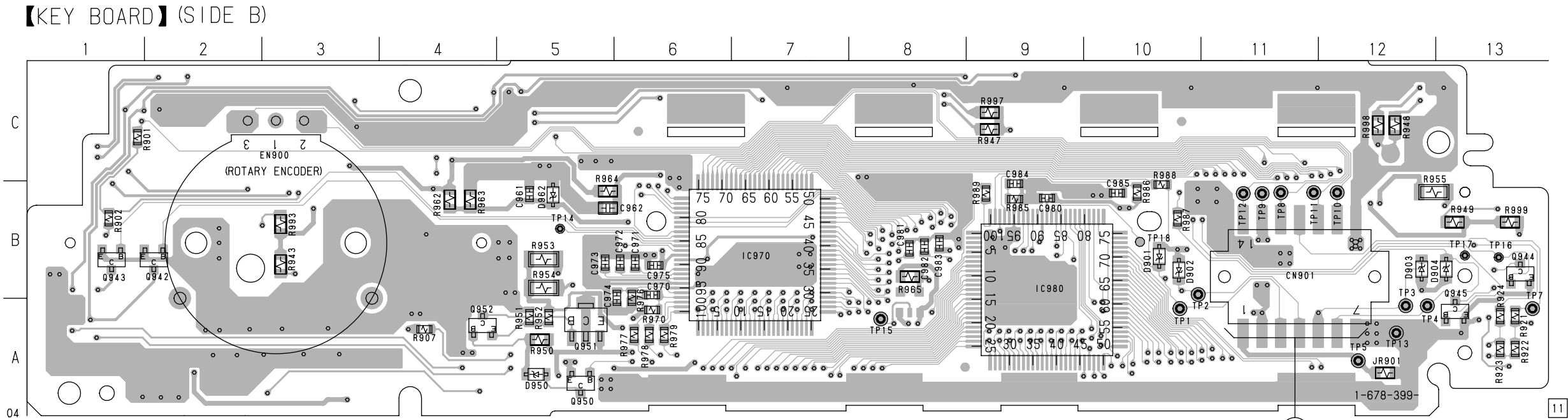
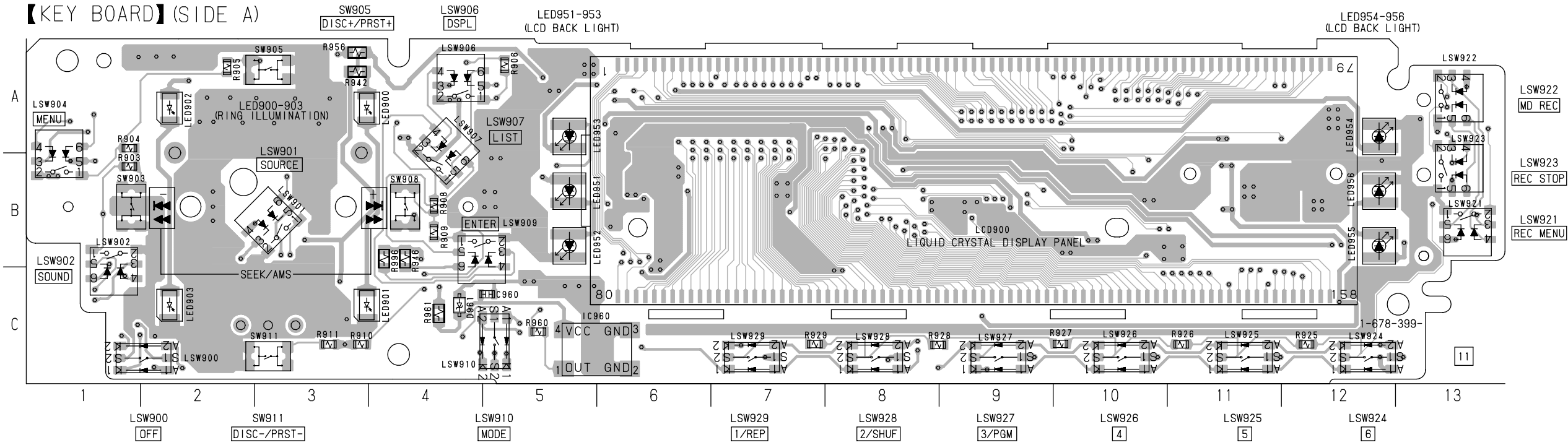


• Waveforms (MODE:MD PLAY)  
(MAIN BLOCK)





3-21. PRINTED WIRING BOARD — KEY SECTION —



• Semiconductor Location

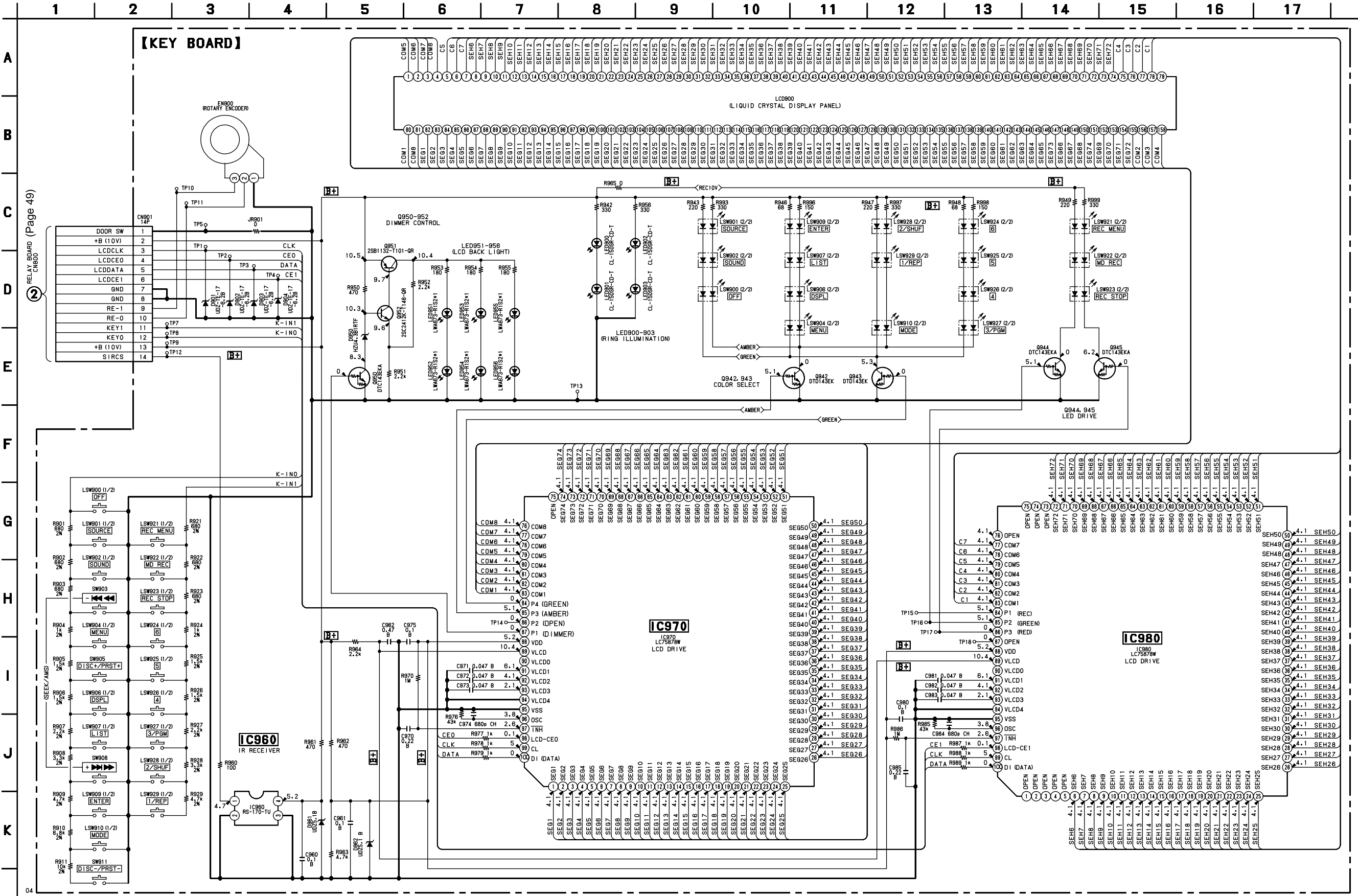
| Ref. No. | Location | Ref. No. | Location |
|----------|----------|----------|----------|
| (D901)   | B-10     | LED903   | C-2      |
| (D902)   | B-10     | LED951   | B-5      |
| (D903)   | B-12     | LED952   | B-5      |
| (D904)   | B-12     | LED953   | A-5      |
| (D950)   | A-5      | LED954   | A-12     |
| D961     | C-4      | LED955   | B-12     |
| (D962)   | B-5      | LED956   | B-12     |
| IC960    | C-6      | (Q942)   | B-2      |
| (IC970)  | B-7      | (Q943)   | B-1      |
| (IC980)  | B-9      | (Q944)   | B-13     |
| LED900   | A-4      | (Q945)   | B-13     |
| LED901   | C-4      | (Q950)   | A-5      |
| LED902   | A-2      | (Q951)   | A-5      |
|          |          | (Q952)   | A-4      |

( ): SIDE B

2  
RELAY BOARD  
CN800  
(Page 48)



3-22. SCHEMATIC DIAGRAM — KEY SECTION —

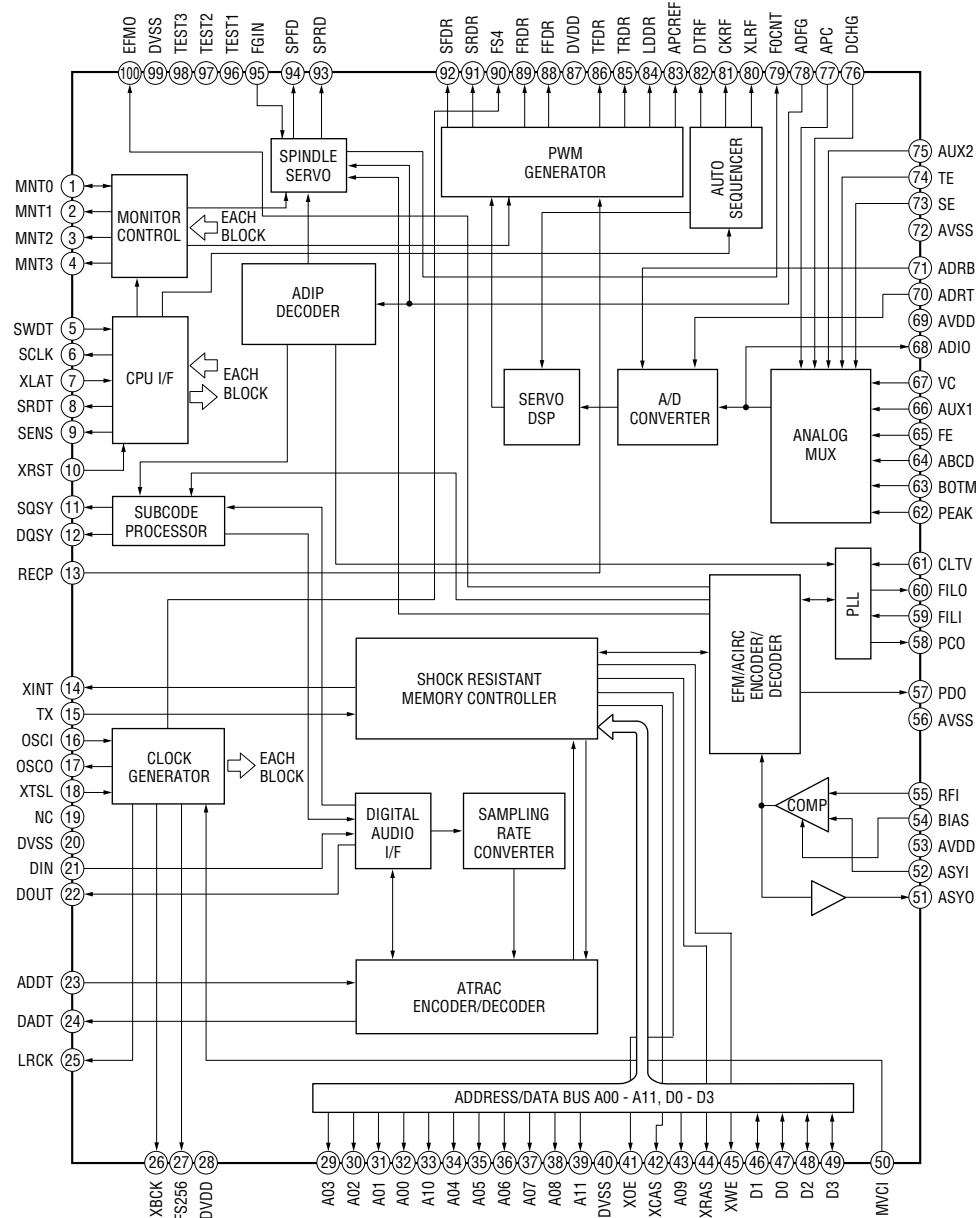


Note:  
• Voltage is dc with respect to ground under no-signal (detuned) condition.  
no mark : FM

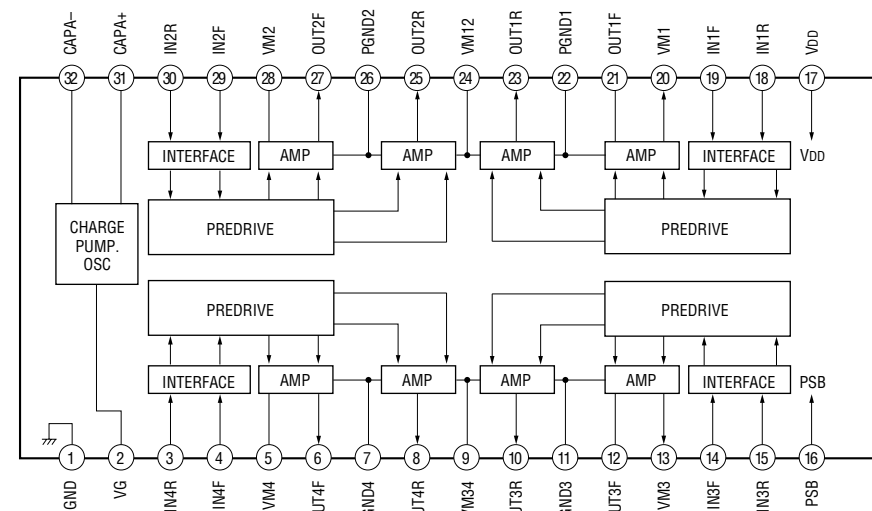


- IC Block Diagrams

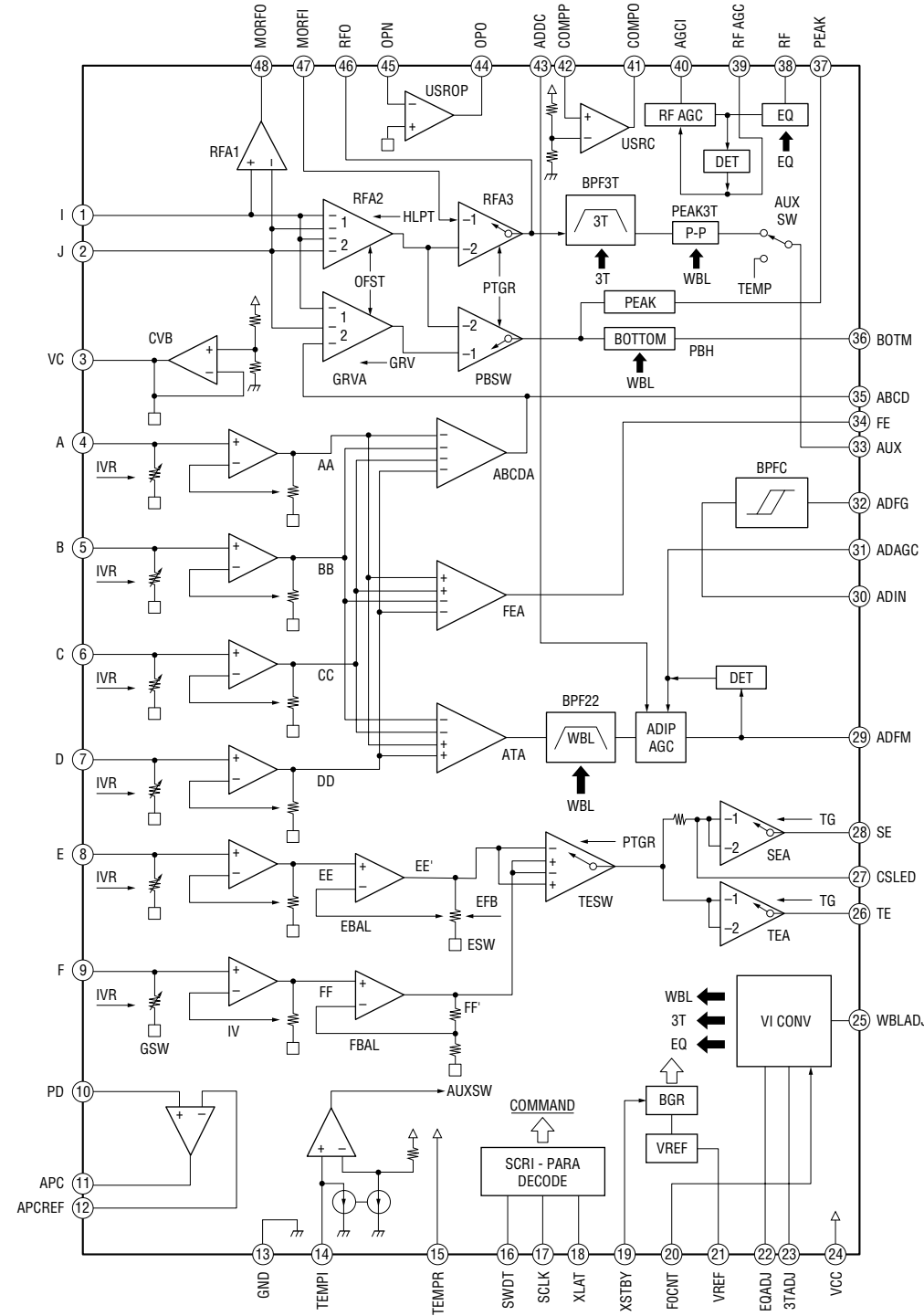
**IC400 CXD2652AR**



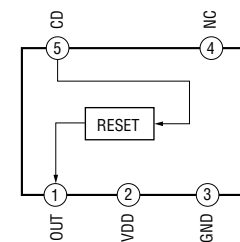
**IC520 BH65111FS-E2**



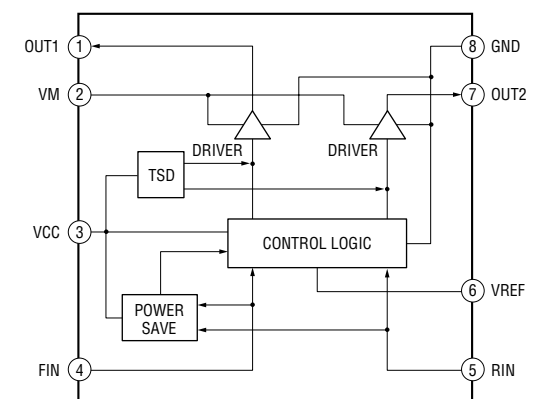
**IC440 CXA2523AR**



**IC702 RN5VD33AA-TL**

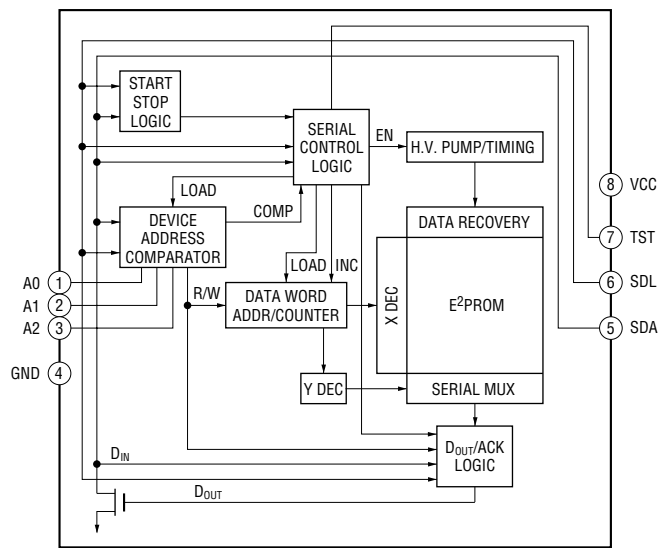


IC521 BA6287F-T1

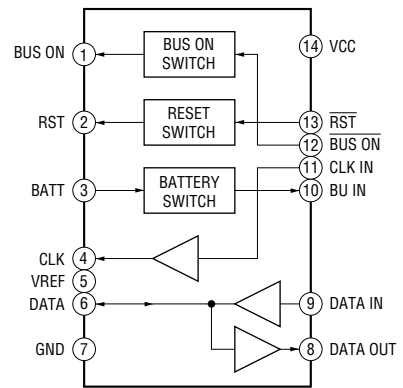




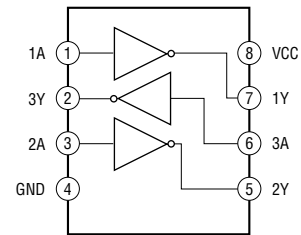
**IC402 AT24C16N-10SI-TR**



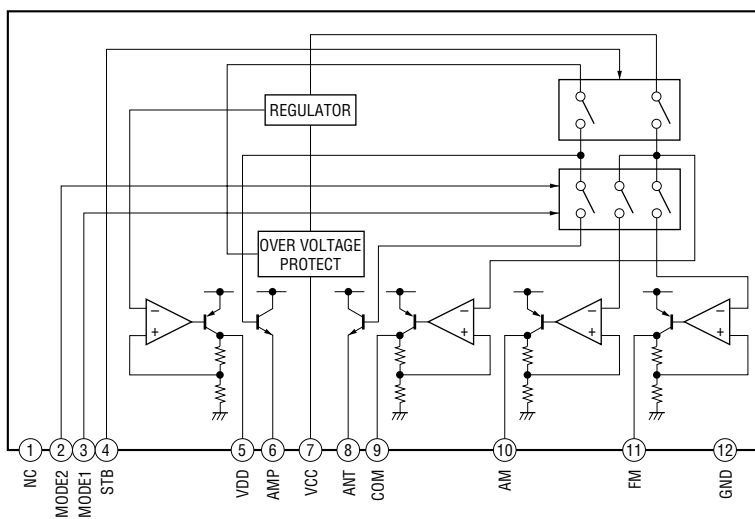
**IC780 BA8270F**



**IC301 TC7WU04FU**

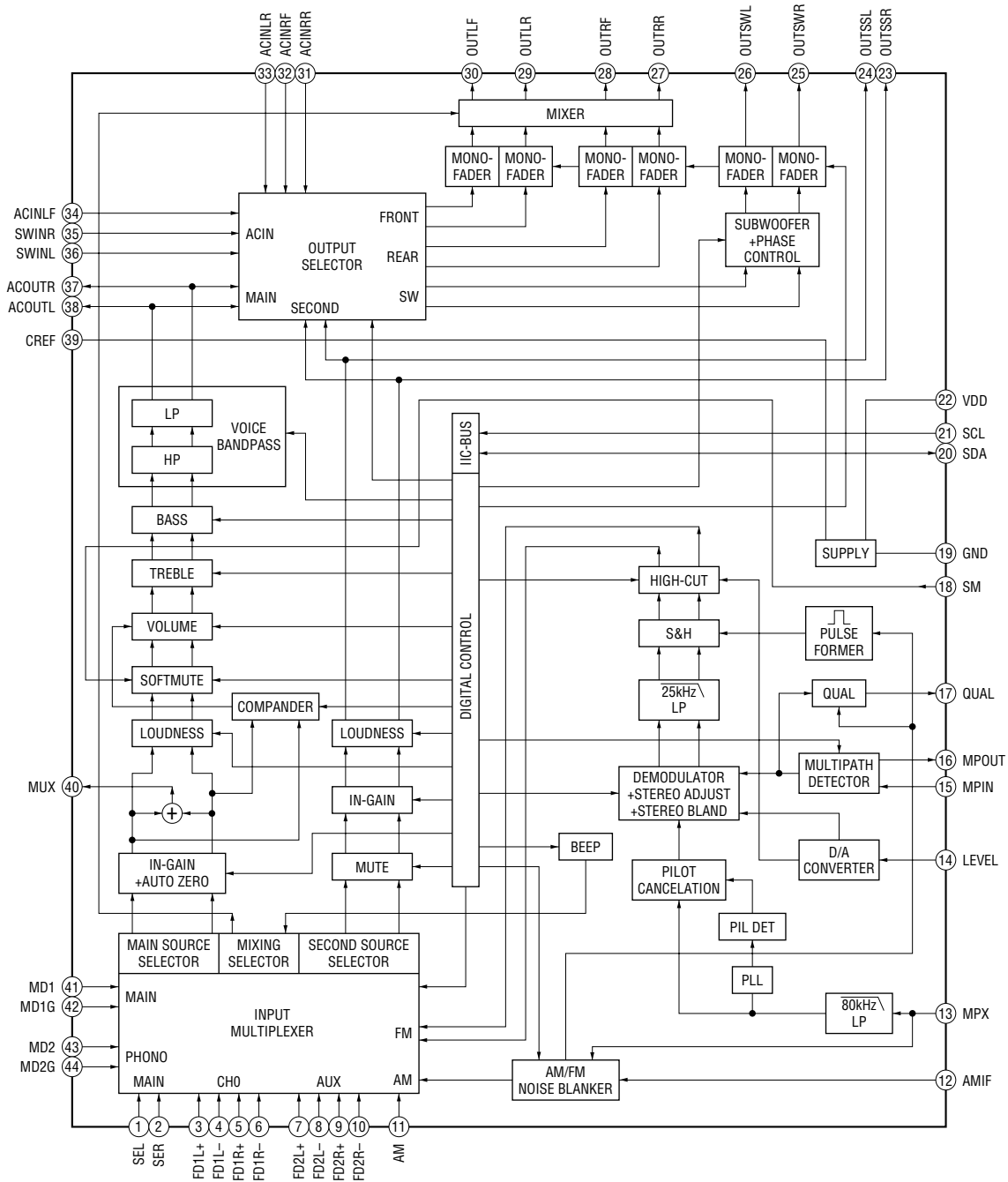


**IC280 BA4908**



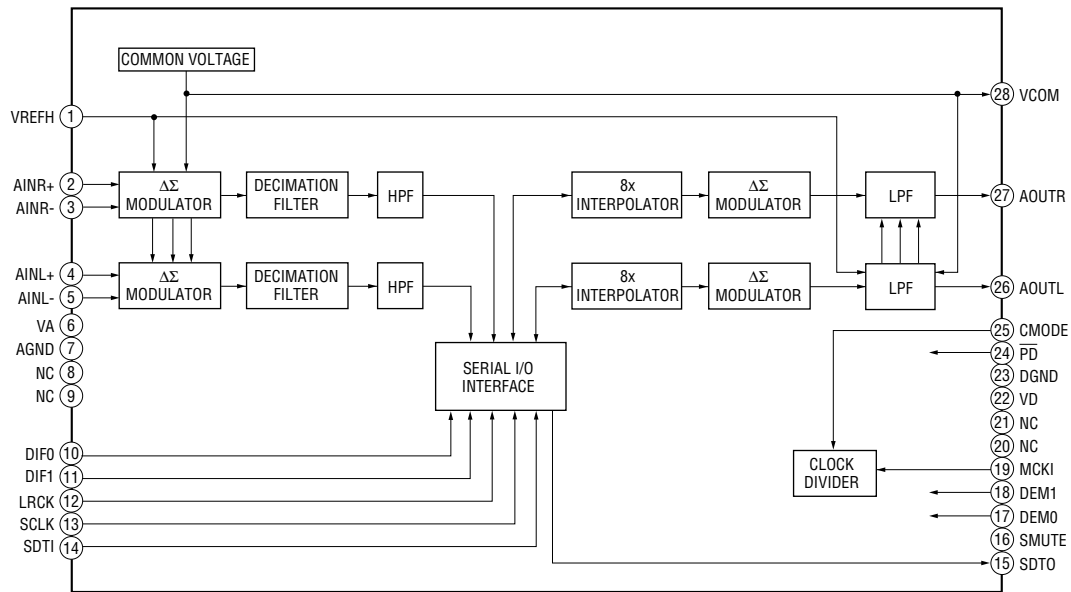


# IC102 TDA7402TR

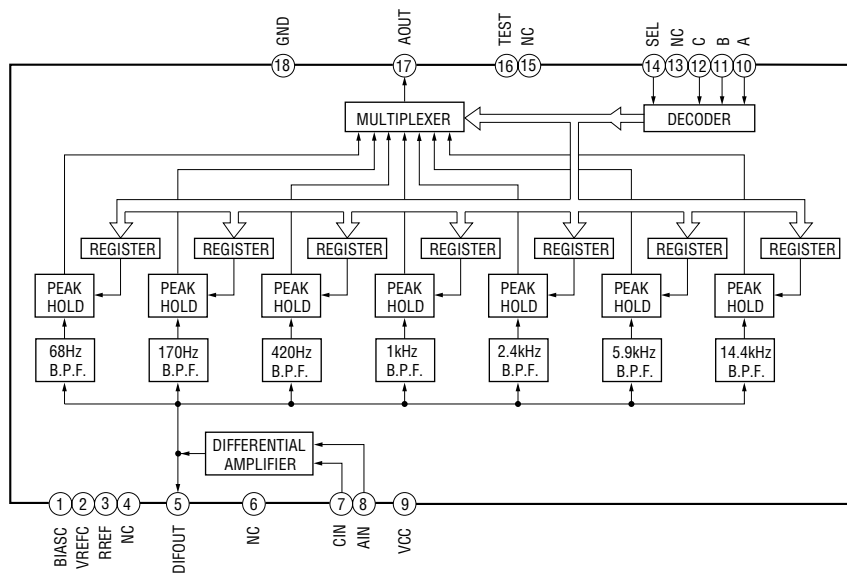




## IC300 AK4523VF-E2

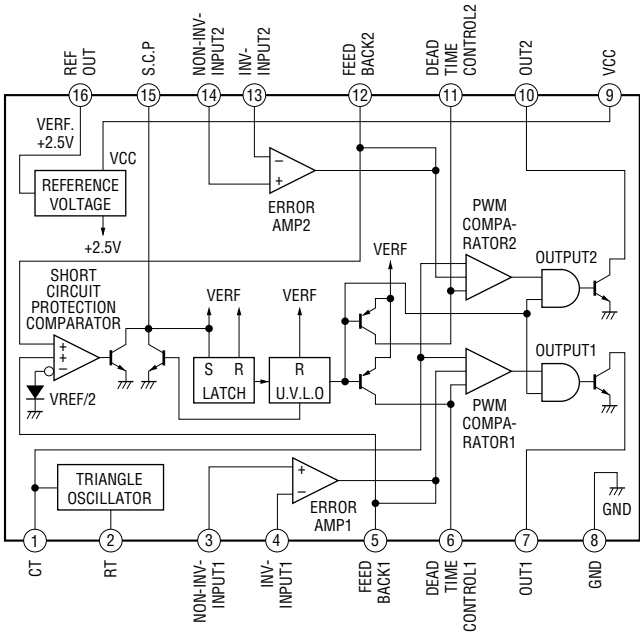


## IC652 BA3834F





IC801 TL1451ACDB





## SECTION 4 EXPLODED VIEWS

### NOTE:

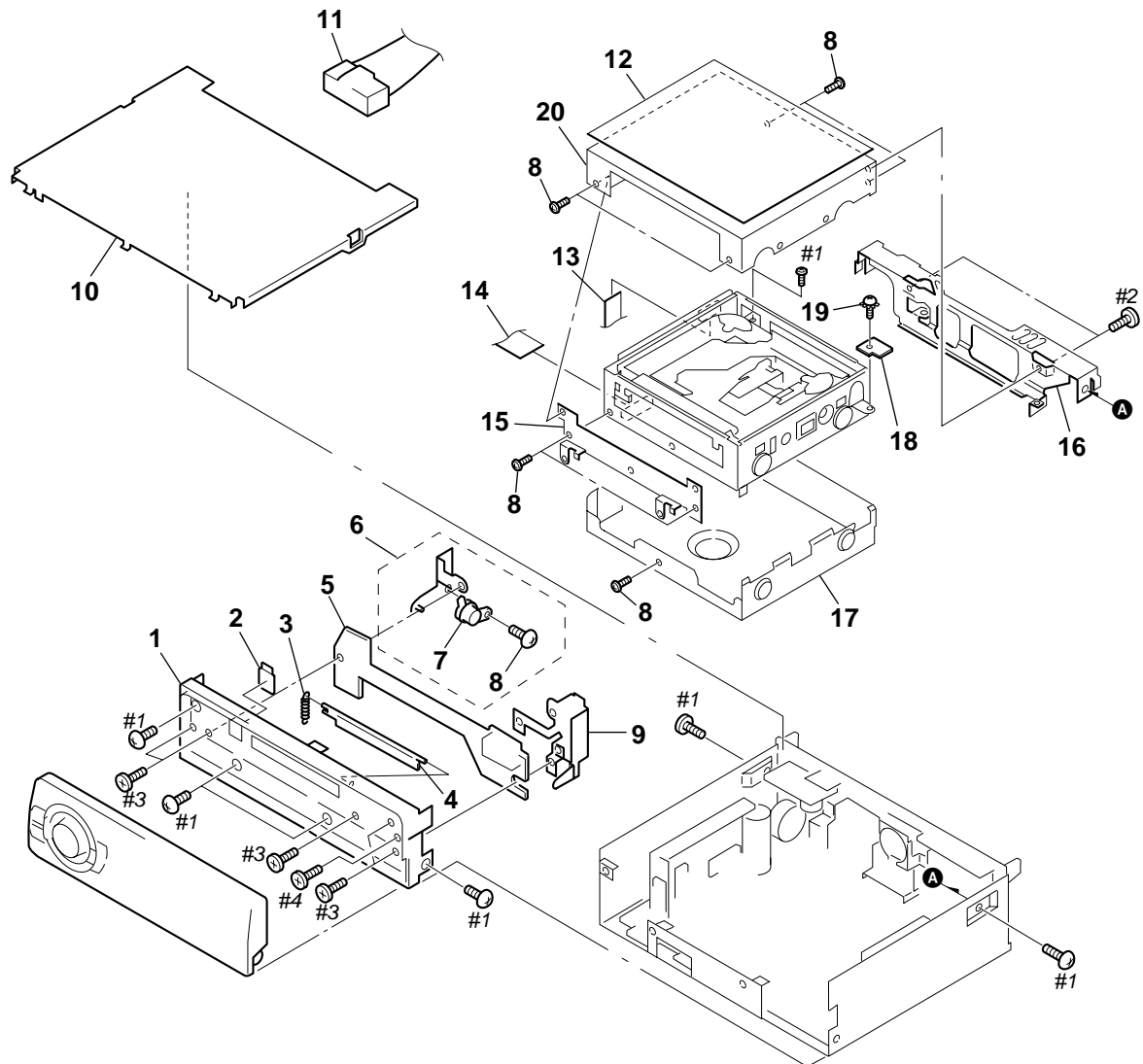
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts  
Example :  
KNOB, BALANCE (WHITE) ... (RED)  
↑                      ↑  
Parts Color    Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

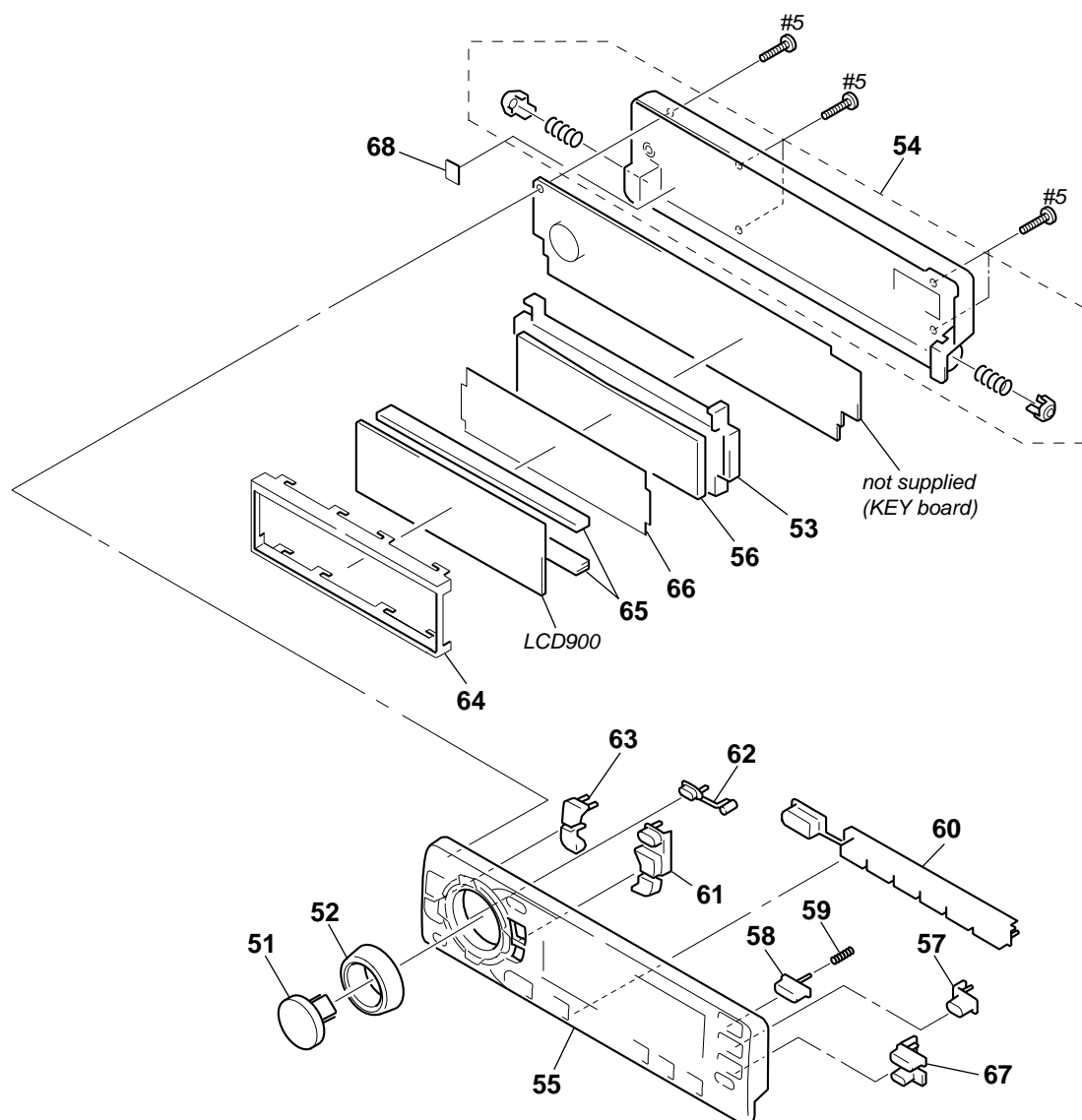
### 4-1. SUB PANEL SECTION



| Ref. No. | Part No.     | Description     | Remark | Ref. No. | Part No.     | Description                      | Remark |
|----------|--------------|-----------------|--------|----------|--------------|----------------------------------|--------|
| 1        | X-3378-496-1 | PANEL ASSY, SUB |        | 11       | 1-790-926-21 | CORD (WITH CONNECTOR) (POWER)    |        |
| 2        | 3-040-990-01 | BUTTON (EJECT)  |        | * 12     | 3-047-278-01 | SHEET (REC/MD)                   |        |
| 3        | 3-025-484-01 | SPRING (DOOR)   |        | 13       | 1-791-560-11 | CABLE, SHIELD FLEXIBLE FLAT      |        |
| 4        | 3-039-574-21 | DOOR (MD)       |        | 14       | 1-792-861-11 | CABLE, FLEXIBLE FLAT             |        |
| * 5      | 1-678-397-11 | RELAY BOARD     |        | * 15     | 3-043-422-01 | BRACKET (F) (MD)                 |        |
| 6        | X-3376-699-2 | GEAR ASSY       |        | * 16     | 3-043-423-01 | BRACKET (R) (MD)                 |        |
| 7        | 3-030-909-02 | DAMPER, OIL     |        | * 17     | 3-039-558-01 | CASE (77), SHIELD                |        |
| 8        | 3-713-786-51 | SCREW +P 2X3    |        | * 18     | 1-678-826-11 | CONNECTION BOARD                 |        |
| 9        | X-3377-621-2 | LOCK ASSY       |        | 19       | 3-376-464-11 | SCREW (+PTT 2.6X6), GROUND POINT |        |
| * 10     | 3-022-316-61 | COVER           |        | * 20     | 3-033-640-21 | CASE (U), SHIELD                 |        |



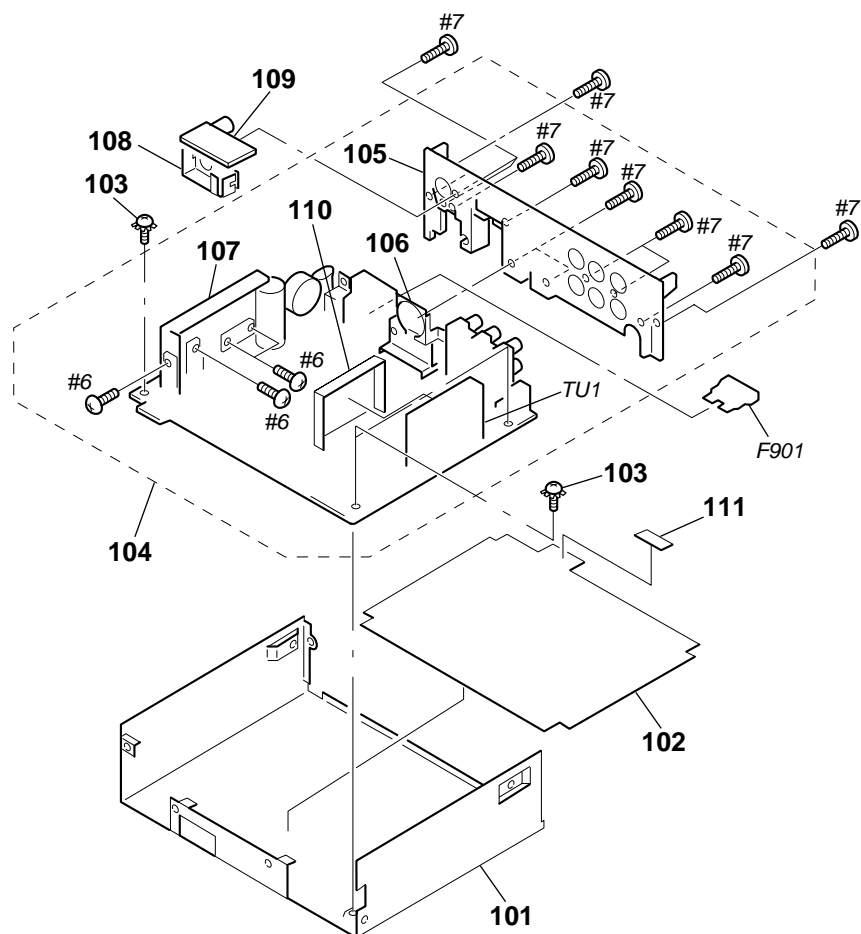
## 4-2. FRONT PANEL SECTION



| Ref. No. | Part No.     | Description              | Remark | Ref. No. | Part No.     | Description                   | Remark |
|----------|--------------|--------------------------|--------|----------|--------------|-------------------------------|--------|
| 51       | 3-040-980-01 | BUTTON (SOURCE)          |        | 61       | 3-041-003-01 | BUTTON (LIST/ENTER)           |        |
| 52       | 3-042-458-01 | KNOB (VOL-DSO)           |        | 62       | 3-040-987-02 | BUTTON (OFF)                  |        |
| * 53     | 3-040-992-01 | HOLDER (LCD)             |        | 63       | 3-040-986-01 | BUTTON (MENU/SOUND)           |        |
| 54       | X-3378-498-1 | PANEL ASSY, FRONT BACK   |        | * 64     | 3-040-997-01 | PLATE (LCD), GROUND           |        |
| 55       | X-3379-161-1 | PANEL ASSY, FRONT        |        | 65       | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION  |        |
| * 56     | 3-040-993-01 | PLATE (LCD), LIGHT GUIDE |        | * 66     | 3-046-372-01 | SHEET (REFLECTOR)             |        |
| 57       | 3-041-005-21 | BUTTON (D)               |        | 67       | 3-041-020-01 | BUTTON (REC MENU)             |        |
| 58       | 3-040-989-01 | BUTTON (OPEN)            |        | 68       | 3-048-250-01 | CUSHION (OFF)                 |        |
| 59       | 3-049-081-01 | SPRING (OPEN)            |        | LCD900   | 1-803-912-11 | DISPLAY PANEL, LIQUID CRYSTAL |        |
| 60       | 3-041-010-01 | BUTTON (1-6/M)           |        |          |              |                               |        |



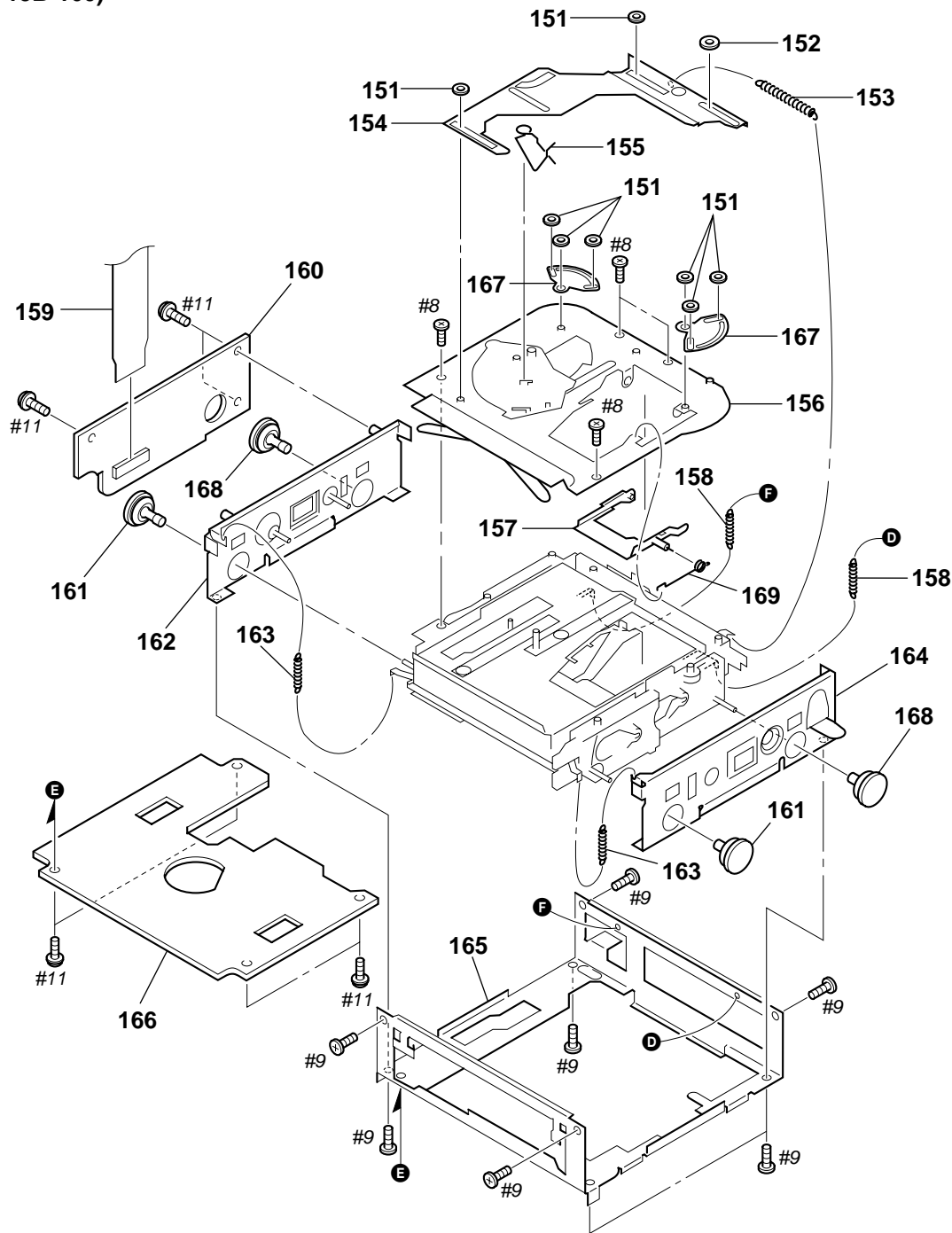
4-3. CHASSIS SECTION



| Ref. No. | Part No.     | Description                      | Remark | Ref. No. | Part No.     | Description                       | Remark |
|----------|--------------|----------------------------------|--------|----------|--------------|-----------------------------------|--------|
| * 101    | 3-022-311-41 | CHASSIS                          |        | * 108    | 3-043-421-01 | BRACKET (PC BOARD)                |        |
| * 102    | 3-047-309-01 | SHEET, INSULATING                |        | * 109    | 1-678-398-11 | DIGITAL BOARD                     |        |
| 103      | 3-376-464-11 | SCREW (+PTT 2.6X6), GROUND POINT |        | * 110    | 3-048-454-01 | SHIELD (COVER)                    |        |
| * 104    | A-3294-973-A | MAIN BOARD, COMPLETE             |        | * 111    | 3-043-497-01 | SHEET, INSULATING (2)             |        |
| * 105    | 3-041-063-01 | HEAT SINK (REC)                  |        | F901     | 1-532-877-11 | FUSE (BLADE TYPE) (AUTO FUSE) 10A |        |
| * 106    | 3-043-424-01 | BRACKET (IC)                     |        | TU1      | A-3220-738-A | TUNER UNIT (TUX-020)              |        |
| * 107    | 3-043-425-01 | HEAT SINK (REG/REC)              |        |          |              |                                   |        |



**4-4. MD MECHANISM SECTION (1)**  
**(MG-715B-160)**

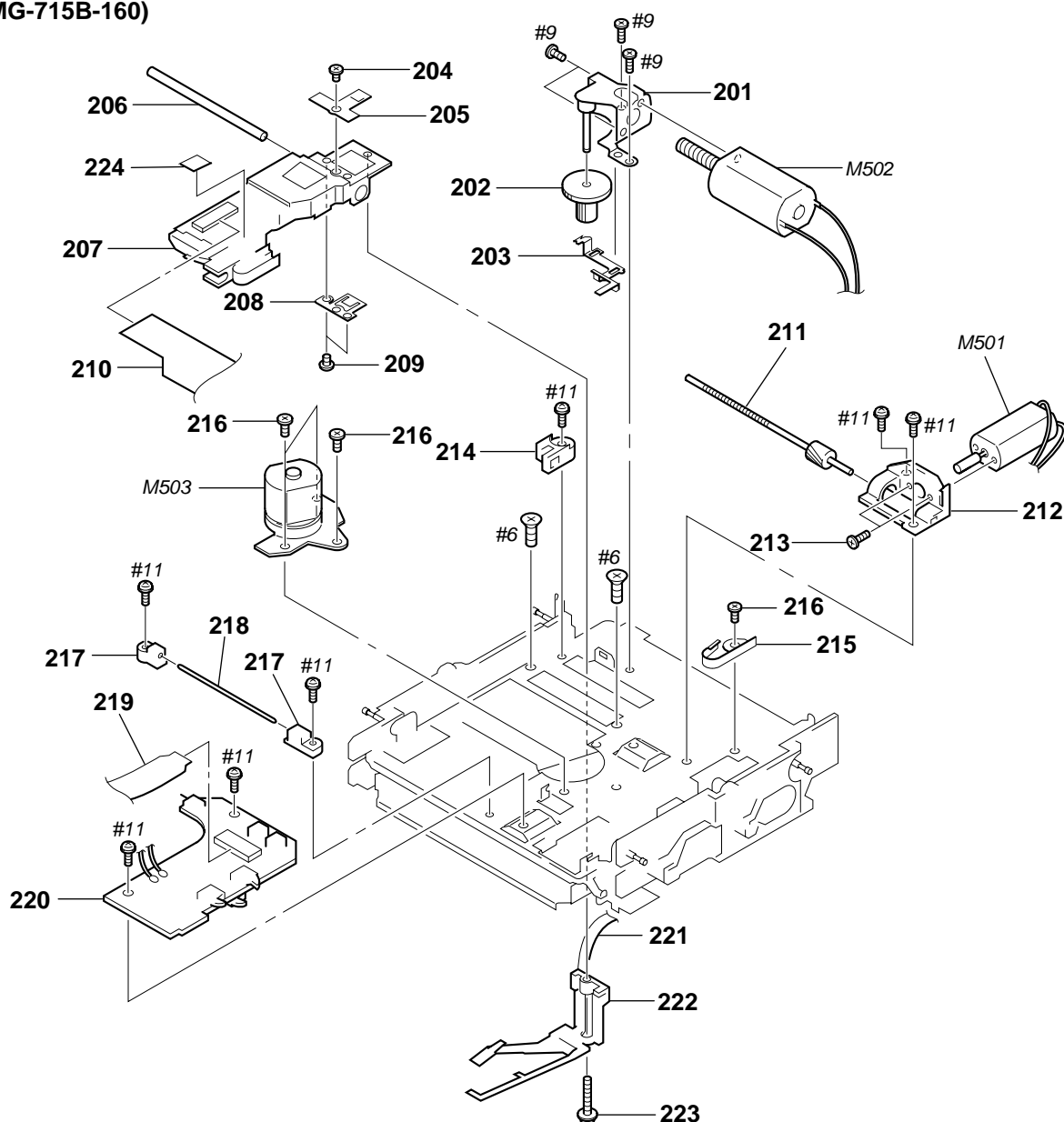


| Ref. No. | Part No.     | Description                   | Remark |
|----------|--------------|-------------------------------|--------|
| 151      | 3-321-813-21 | WASHER, COTTER POLYETHYLENE   |        |
| 152      | 3-038-515-01 | RING, RETAINING               |        |
| 153      | 3-030-222-01 | SPRING (T), TENSION           |        |
| 154      | 3-030-191-01 | SLIDER (T)                    |        |
| 155      | 3-030-198-03 | SPRING (LIMITER), TORSION     |        |
| * 156    | X-3376-408-3 | CHASSIS (T) ASSY              |        |
| 157      | X-3376-415-1 | ARM (OWH) ASSY                |        |
| 158      | 3-030-195-01 | SPRING (B), TENSION           |        |
| 159      | 1-790-418-11 | MICRO COMPUTER FLEXIBLE BOARD |        |
| * 160    | A-3317-980-A | COMPUTER BOARD, COMPLETE      |        |

| Ref. No. | Part No.     | Description           | Remark |
|----------|--------------|-----------------------|--------|
| 161      | 3-931-897-31 | DAMPER (T)            |        |
| * 162    | X-3376-409-1 | CHASSIS (L) ASSY      |        |
| 163      | 3-030-194-02 | SPRING (F), TENSION   |        |
| * 164    | X-3376-410-1 | CHASSIS (R) ASSY      |        |
| * 165    | 3-030-174-12 | CHASSIS (M)           |        |
| * 166    | A-3326-079-A | SERVO BOARD, COMPLETE |        |
| 167      | 3-030-190-01 | LEVER (LK)            |        |
| 168      | 3-931-897-51 | DAMPER (T)            |        |
| 169      | 3-038-671-01 | SPRING (OWH), TORSION |        |



## 4-5. MD MECHANISM SECTION (2) (MG-715B-160)



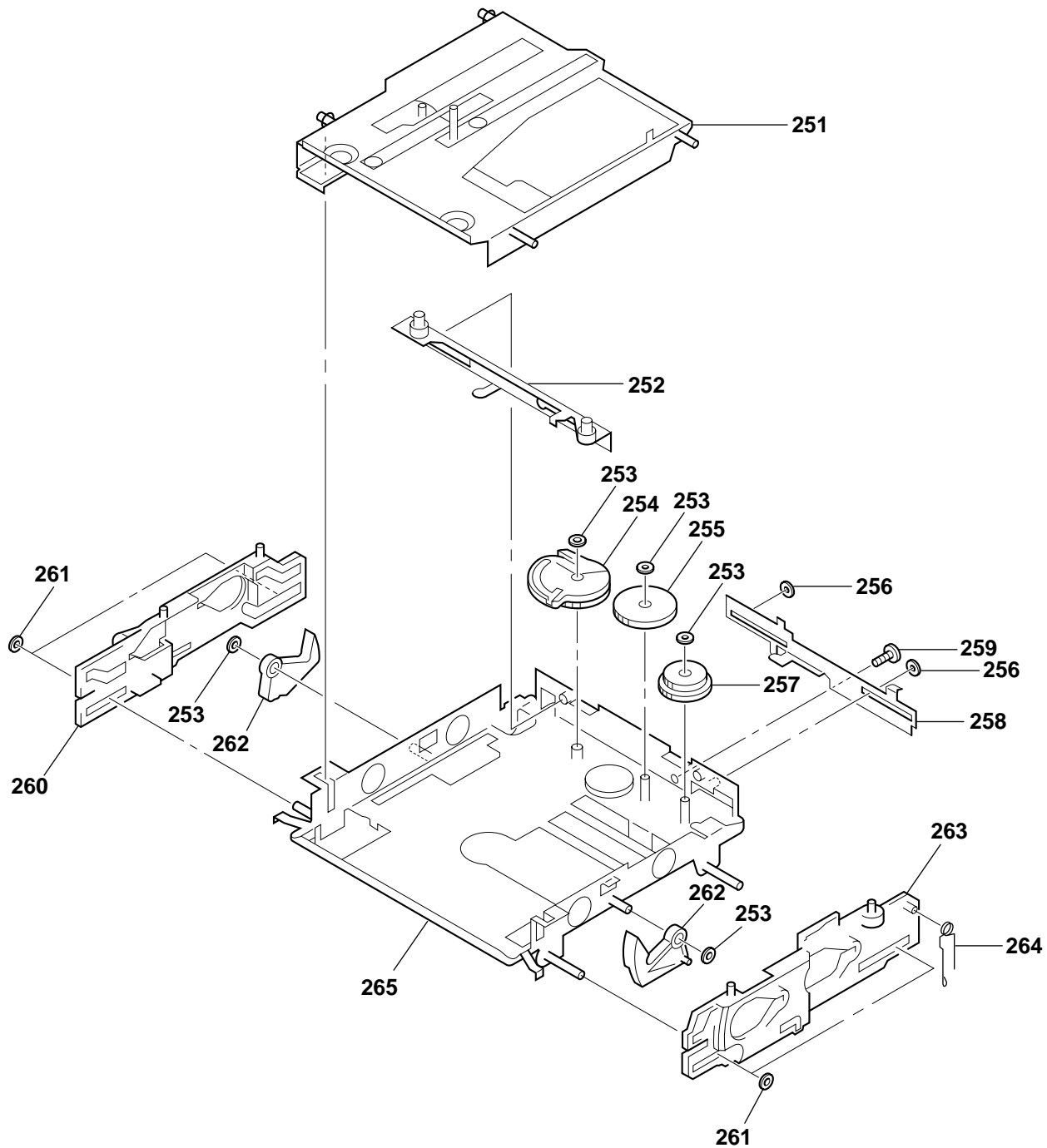
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

| Ref. No.     | Part No.     | Description                   | Remark | Ref. No. | Part No.     | Description                   | Remark |
|--------------|--------------|-------------------------------|--------|----------|--------------|-------------------------------|--------|
| 201          | X-3376-412-2 | BRACKET (LD) ASSY             |        | 215      | 3-030-188-01 | SPRING (SL), LEAF             |        |
| 202          | 3-030-176-03 | WHEEL (LD), WORM              |        | 216      | 3-965-550-02 | SCREW (M1.7X1.6)              |        |
| 203          | 3-030-197-02 | LEVER (OPS)                   |        | 217      | 3-030-187-01 | BASE (SLB)                    |        |
| 204          | 3-342-375-11 | SCREW (M1.7X1.4), SPECIAL     |        | 218      | 3-030-185-01 | SHAFT (SLB)                   |        |
| 205          | 4-987-061-01 | SPACER (RACK)                 |        | 219      | 1-790-416-11 | SENSOR FLEXIBLE BOARD         |        |
| 206          | 4-996-265-01 | SHAFT, MAIN                   |        | 220      | A-3317-305-A | SENSOR BOARD, COMPLETE        |        |
| $\Delta$ 207 | 8-583-057-02 | PICK-UP, OPTICAL KMS-263A/J1N |        | 221      | 1-790-434-11 | OWH FLEXIBLE BOARD            |        |
| 208          | 3-030-199-03 | RACK (INSERT)                 |        | 222      | 1-500-412-21 | HEAD, OVER WRITE (RF325-74A)  |        |
| 209          | 3-366-890-11 | SCREW (M1.4)                  |        | 223      | 4-988-560-01 | SCREW (+P 1.7X6)              |        |
| 210          | 1-790-417-11 | OP FLEXIBLE BOARD             |        | 224      | 3-047-912-01 | COVER, OP                     |        |
| 211          | X-3376-559-1 | SHAFT (FEED) ASSY             |        | M501     | X-3376-526-1 | MOTOR ASSY, SLED (SLED)       |        |
| 212          | 3-030-181-01 | BRACKET (SL)                  |        | M502     | X-3376-525-1 | MOTOR ASSY, LOADING (LOADING) |        |
| 213          | 3-345-648-01 | SCREW (M1.4X3)                |        | M503     | A-3301-942-A | MOTOR ASSY, SPINDLE (SPINDLE) |        |
| 214          | 3-030-186-01 | BASE (SLA)                    |        |          |              |                               |        |



**4-6. MD MECHANISM SECTION (3)**  
**(MG-715B-160)**



| Ref. No. | Part No.     | Description                 | Remark | Ref. No. | Part No.     | Description                      | Remark |
|----------|--------------|-----------------------------|--------|----------|--------------|----------------------------------|--------|
| 251      | X-3376-418-7 | HOLDER ASSY                 |        | 259      | 3-880-990-00 | SCREW (1.7X3), FLAT, (+) SPECIAL |        |
| 252      | X-3376-413-2 | SLIDER (LK) ASSY            |        | 260      | X-3376-420-4 | SLIDER (L) ASSY                  |        |
| 253      | 3-321-813-21 | WASHER, COTTER POLYETHYLENE |        | 261      | 3-038-514-01 | RING, RETAINING                  |        |
| 254      | 3-030-180-01 | GEAR (CAM)                  |        | 262      | 3-030-189-01 | LEVER (HOOK)                     |        |
| 255      | 3-030-178-03 | GEAR (LD2)                  |        | 263      | X-3376-421-2 | SLIDER (R) ASSY                  |        |
| 256      | 3-038-515-01 | RING, RETAINING             |        | 264      | 3-030-223-01 | SPRING (OPS), TORSION            |        |
| 257      | 3-030-177-02 | GEAR (LD1)                  |        | 265      | X-3376-406-5 | CHASSIS (OP) ASSY                |        |
| 258      | X-3376-414-1 | SLIDER (LD) ASSY            |        |          |              |                                  |        |



## SECTION 5 ELECTRICAL PARTS LIST

## COMPUTER

### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example:  
uA.. :  $\mu$ A.. uPA.. :  $\mu$ PA..  
uPB.. :  $\mu$ PB.. uPC.. :  $\mu$ PC.. uPD.. :  $\mu$ PD..
- CAPACITORS  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

| Ref. No. | Part No.     | Description                       | Remark |  |  | Ref. No. | Part No.     | Description        | Remark |  |  |
|----------|--------------|-----------------------------------|--------|--|--|----------|--------------|--------------------|--------|--|--|
| *        | A-3317-980-A | COMPUTER BOARD, COMPLETE<br>***** |        |  |  | R562     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              | < CAPACITOR >                     |        |  |  | R563     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C560     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  | R564     | 1-216-797-11 | METAL CHIP 10 5%   | 1/16W  |  |  |
| C561     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  | R565     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| C562     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  | R566     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| C563     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  |          |              |                    |        |  |  |
| C564     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  | R567     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              |                                   |        |  |  | R568     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C568     | 1-162-927-11 | CERAMIC CHIP 100PF 5% 50V         |        |  |  | R569     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C569     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  | R570     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C570     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  | R572     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C571     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  |          |              |                    |        |  |  |
| C573     | 1-131-618-21 | ELECT CHIP 22uF 20% 12.5V         |        |  |  | R573     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              |                                   |        |  |  | R574     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C574     | 1-119-751-11 | TANTAL. CHIP 22uF 20% 16V         |        |  |  | R575     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| C575     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V       |        |  |  | R576     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| C578     | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V          |        |  |  | R578     | 1-216-797-11 | METAL CHIP 10 5%   | 1/16W  |  |  |
| C579     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V        |        |  |  |          |              |                    |        |  |  |
|          |              | < CONNECTOR >                     |        |  |  | R579     | 1-216-797-11 | METAL CHIP 10 5%   | 1/16W  |  |  |
| CN560    | 1-774-930-21 | CONNECTOR, FFC/FPC 51P            |        |  |  | R580     | 1-216-847-11 | METAL CHIP 150K 5% | 1/16W  |  |  |
| CN561    | 1-573-355-11 | CONNECTOR, FFC/FPC 15P            |        |  |  | R581     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
|          |              | < DIODE >                         |        |  |  | R582     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| D560     | 8-719-988-61 | DIODE 1SS355TE-17                 |        |  |  | R583     | 1-216-847-11 | METAL CHIP 150K 5% | 1/16W  |  |  |
| D561     | 8-719-988-61 | DIODE 1SS355TE-17                 |        |  |  |          |              |                    |        |  |  |
|          |              | < IC >                            |        |  |  | R584     | 1-216-847-11 | METAL CHIP 150K 5% | 1/16W  |  |  |
| IC560    | 8-759-678-04 | IC MB90574PFV-G-297-BND           |        |  |  | R585     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| IC561    | 8-759-238-47 | IC TC74HCT7007AF(EL)              |        |  |  | R588     | 1-216-797-11 | METAL CHIP 10 5%   | 1/16W  |  |  |
| IC562    | 8-759-238-47 | IC TC74HCT7007AF(EL)              |        |  |  | R589     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| IC563    | 8-759-495-76 | IC RN5VD33AA-TL                   |        |  |  | R595     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| IC564    | 8-759-271-86 | IC TC7SH04FU-TE85R                |        |  |  |          |              |                    |        |  |  |
|          |              | < COIL >                          |        |  |  | R597     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
| L560     | 1-412-058-11 | INDUCTOR CHIP 10uH                |        |  |  | R599     | 1-216-864-11 | METAL CHIP 0 5%    | 1/16W  |  |  |
|          |              | < TRANSISTOR >                    |        |  |  | R600     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |
| Q561     | 8-729-900-53 | TRANSISTOR DTC114EKA-T146         |        |  |  | R601     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
| Q562     | 8-729-106-60 | TRANSISTOR 2SB1132-T101-QR        |        |  |  | R602     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |
|          |              | < RESISTOR >                      |        |  |  |          |              |                    |        |  |  |
| R560     | 1-216-809-11 | METAL CHIP 100 5%                 | 1/16W  |  |  | R603     | 1-216-797-11 | METAL CHIP 10 5%   | 1/16W  |  |  |
| R561     | 1-216-809-11 | METAL CHIP 100 5%                 | 1/16W  |  |  | R606     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
|          |              |                                   |        |  |  | R608     | 1-216-845-11 | METAL CHIP 100K 5% | 1/16W  |  |  |
|          |              |                                   |        |  |  | R610     | 1-216-864-11 | METAL CHIP 0 5%    | 1/16W  |  |  |
|          |              |                                   |        |  |  | R612     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |
|          |              |                                   |        |  |  |          |              |                    |        |  |  |
|          |              |                                   |        |  |  | R613     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |
|          |              |                                   |        |  |  | R614     | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W  |  |  |
|          |              |                                   |        |  |  | R615     | 1-216-825-11 | METAL CHIP 2.2K 5% | 1/16W  |  |  |
|          |              |                                   |        |  |  | R616     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              |                                   |        |  |  | R617     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              |                                   |        |  |  |          |              |                    |        |  |  |
|          |              |                                   |        |  |  | R618     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              |                                   |        |  |  | R619     | 1-216-809-11 | METAL CHIP 100 5%  | 1/16W  |  |  |
|          |              |                                   |        |  |  | R620     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |
|          |              |                                   |        |  |  | R622     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |
|          |              |                                   |        |  |  | R623     | 1-216-821-11 | METAL CHIP 1K 5%   | 1/16W  |  |  |



## COMPUTER

## CONNECTION

## DIGITAL

## KEY

| Ref. No.             | Part No.     | Description                  | Remark      |      |       |
|----------------------|--------------|------------------------------|-------------|------|-------|
| R624                 | 1-216-825-11 | METAL CHIP                   | 2.2K        | 5%   | 1/16W |
| R625                 | 1-216-825-11 | METAL CHIP                   | 2.2K        | 5%   | 1/16W |
| R627                 | 1-216-825-11 | METAL CHIP                   | 2.2K        | 5%   | 1/16W |
| R628                 | 1-218-712-11 | METAL CHIP                   | 6.8K        | 0.5% | 1/16W |
| R629                 | 1-216-065-11 | RES-CHIP                     | 4.7K        | 5%   | 1/10W |
| R630                 | 1-216-065-11 | RES-CHIP                     | 4.7K        | 5%   | 1/10W |
| R631                 | 1-216-073-00 | METAL CHIP                   | 10K         | 5%   | 1/10W |
| R632                 | 1-216-845-11 | METAL CHIP                   | 100K        | 5%   | 1/16W |
| R633                 | 1-216-845-11 | METAL CHIP                   | 100K        | 5%   | 1/16W |
| R635                 | 1-216-853-11 | METAL CHIP                   | 470K        | 5%   | 1/16W |
| < NETWORK RESISTOR > |              |                              |             |      |       |
| RB561                | 1-233-810-21 | RES, NETWORK                 | 100K (3216) |      |       |
| RB562                | 1-233-810-21 | RES, NETWORK                 | 100K (3216) |      |       |
| < VIBRATOR >         |              |                              |             |      |       |
| X560                 | 1-781-002-21 | VIBRATOR, CERAMIC (3.6MHz)   |             |      |       |
| *****                |              |                              |             |      |       |
| *                    | 1-678-826-11 | CONNECTION BOARD             |             |      |       |
| *****                |              |                              |             |      |       |
| < CAPACITOR >        |              |                              |             |      |       |
| C899                 | 1-163-133-00 | CERAMIC CHIP                 | 470PF       | 5%   | 50V   |
| *****                |              |                              |             |      |       |
| *                    | 1-678-398-11 | DIGITAL BOARD                |             |      |       |
| *****                |              |                              |             |      |       |
| *                    | 3-043-421-01 | BRACKET (PC BOARD)           |             |      |       |
| < BUZZER >           |              |                              |             |      |       |
| BZ800                | 1-504-920-11 | BUZZER                       |             |      |       |
| < CONNECTOR >        |              |                              |             |      |       |
| CN803                | 1-750-862-21 | PIN, CONNECTOR (PC BOARD) 5P |             |      |       |
| J800                 | 1-793-262-21 | PLUG, CONNECTOR (DIGITAL IN) |             |      |       |
| *****                |              |                              |             |      |       |
| KEY BOARD            |              |                              |             |      |       |
| *****                |              |                              |             |      |       |
|                      | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION |             |      |       |
| *                    | 3-040-992-01 | HOLDER (LCD)                 |             |      |       |
| *                    | 3-040-993-01 | PLATE (LCD), LIGHT GUIDE     |             |      |       |
| *                    | 3-040-997-01 | PLATE (LCD), GROUND          |             |      |       |
| *                    | 3-046-372-01 | SHEET (REFLECTOR)            |             |      |       |
| < CAPACITOR >        |              |                              |             |      |       |
| C960                 | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF       | 10%  | 16V   |
| C961                 | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF       | 10%  | 16V   |
| C962                 | 1-107-823-11 | CERAMIC CHIP                 | 0.47uF      | 10%  | 16V   |
| C970                 | 1-115-467-11 | CERAMIC CHIP                 | 0.22uF      | 10%  | 10V   |
| C971                 | 1-165-176-11 | CERAMIC CHIP                 | 0.047uF     | 10%  | 16V   |
| C972                 | 1-165-176-11 | CERAMIC CHIP                 | 0.047uF     | 10%  | 16V   |

| Ref. No.                   | Part No.     | Description                          | Remark  |     |     |
|----------------------------|--------------|--------------------------------------|---------|-----|-----|
| C973                       | 1-165-176-11 | CERAMIC CHIP                         | 0.047uF | 10% | 16V |
| C974                       | 1-115-412-11 | CERAMIC CHIP                         | 680PF   | 5%  | 25V |
| C975                       | 1-107-826-11 | CERAMIC CHIP                         | 0.1uF   | 10% | 16V |
| C980                       | 1-107-826-11 | CERAMIC CHIP                         | 0.1uF   | 10% | 16V |
| C981                       | 1-165-176-11 | CERAMIC CHIP                         | 0.047uF | 10% | 16V |
| C982                       | 1-165-176-11 | CERAMIC CHIP                         | 0.047uF | 10% | 16V |
| C983                       | 1-165-176-11 | CERAMIC CHIP                         | 0.047uF | 10% | 16V |
| C984                       | 1-115-412-11 | CERAMIC CHIP                         | 680PF   | 5%  | 25V |
| C985                       | 1-115-467-11 | CERAMIC CHIP                         | 0.22uF  | 10% | 10V |
| < CONNECTOR >              |              |                                      |         |     |     |
| CN901                      | 1-794-065-11 | PLUG, CONNECTOR 14P                  |         |     |     |
| < DIODE >                  |              |                                      |         |     |     |
| D901                       | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                 |         |     |     |
| D902                       | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                 |         |     |     |
| D903                       | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                 |         |     |     |
| D904                       | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                 |         |     |     |
| D950                       | 8-719-042-17 | DIODE HZU4.3B1RTF                    |         |     |     |
| D961                       | 8-719-976-99 | DIODE UDZ-TE-17-5.1B                 |         |     |     |
| D962                       | 8-719-976-99 | DIODE UDZ-TE-17-5.1B                 |         |     |     |
| < ROTARY ENCODER >         |              |                                      |         |     |     |
| EN900                      | 1-475-014-11 | ENCODER, ROTARY                      |         |     |     |
| < IC >                     |              |                                      |         |     |     |
| IC960                      | 8-749-012-25 | IC RS-170-TU                         |         |     |     |
| IC970                      | 8-759-653-26 | IC LC75878W                          |         |     |     |
| IC980                      | 8-759-653-26 | IC LC75878W                          |         |     |     |
| < JUMPER RESISTOR >        |              |                                      |         |     |     |
| JR901                      | 1-216-295-00 | SHORT                                | 0       |     |     |
| < LIQUID CRYSTAL DISPLAY > |              |                                      |         |     |     |
| LCD900                     | 1-803-912-11 | DISPLAY PANEL, LIQUID CRYSTAL        |         |     |     |
| < DIODE >                  |              |                                      |         |     |     |
| LED900                     | 8-719-026-38 | LEDIODE CL-150SR-CD-T                |         |     |     |
| (RING ILLUMINATION)        |              |                                      |         |     |     |
| LED901                     | 8-719-026-38 | LEDIODE CL-150SR-CD-T                |         |     |     |
| (RING ILLUMINATION)        |              |                                      |         |     |     |
| LED902                     | 8-719-026-38 | LEDIODE CL-150SR-CD-T                |         |     |     |
| (RING ILLUMINATION)        |              |                                      |         |     |     |
| LED903                     | 8-719-026-38 | LEDIODE CL-150SR-CD-T                |         |     |     |
| (RING ILLUMINATION)        |              |                                      |         |     |     |
| LED951                     | 8-719-078-19 | LEDIODE LWA673-R1S2 (LCD BACK LIGHT) |         |     |     |
| LED952                     | 8-719-078-19 | LEDIODE LWA673-R1S2 (LCD BACK LIGHT) |         |     |     |
| LED953                     | 8-719-078-19 | LEDIODE LWA673-R1S2 (LCD BACK LIGHT) |         |     |     |
| LED954                     | 8-719-078-19 | LEDIODE LWA673-R1S2 (LCD BACK LIGHT) |         |     |     |
| LED955                     | 8-719-078-19 | LEDIODE LWA673-R1S2 (LCD BACK LIGHT) |         |     |     |
| LED956                     | 8-719-078-19 | LEDIODE LWA673-R1S2 (LCD BACK LIGHT) |         |     |     |



| < SWITCH > |              |  |
|------------|--------------|--|
| SW903      | 1-771-884-11 | SWITCH, TACTILE (WITH LED) (SEEK/AMS<br>- I◀◀◀◀) |
| SW905      | 1-771-884-11 | SWITCH, TACTILE (WITH LED) (DISC+/PRST+)         |
| SW908      | 1-771-884-11 | SWITCH, TACTILE (WITH LED) (SEEK/AMS<br>+ ▶▶▶▶)  |
| SW911      | 1-771-884-11 | SWITCH, TACTILE (WITH LED) (DISC-/PRST-)         |



# MAIN

| Ref. No. | Part No.     | Description  | Remark   |     |     | Ref. No. | Part No.     | Description   | Remark  |       |      |
|----------|--------------|--------------|----------|-----|-----|----------|--------------|---------------|---------|-------|------|
| C6       | 1-164-227-11 | CERAMIC CHIP | 0.022uF  | 10% | 25V | C302     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C7       | 1-164-346-11 | CERAMIC CHIP | 1uF      |     | 16V | C304     | 1-126-603-11 | ELECT CHIP    | 4.7uF   | 20%   | 35V  |
| C8       | 1-163-233-11 | CERAMIC CHIP | 18PF     | 5%  | 50V | C305     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C9       | 1-162-970-11 | CERAMIC CHIP | 0.01uF   | 10% | 16V | C307     | 1-126-603-11 | ELECT CHIP    | 4.7uF   | 20%   | 35V  |
| C10      | 1-164-156-11 | CERAMIC CHIP | 0.1uF    |     | 25V | C308     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C11      | 1-117-681-11 | ELECT CHIP   | 100uF    | 20% | 16V | C309     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C12      | 1-164-156-11 | CERAMIC CHIP | 0.1uF    |     | 25V | C310     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C13      | 1-162-970-11 | CERAMIC CHIP | 0.01uF   | 10% | 25V | C311     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C17      | 1-164-156-11 | CERAMIC CHIP | 0.1uF    |     | 25V | C314     | 1-163-227-11 | CERAMIC CHIP  | 10PF    | 0.5PF | 50V  |
| C18      | 1-126-395-11 | ELECT        | 22uF     | 20% | 16V | C315     | 1-163-243-11 | CERAMIC CHIP  | 47PF    | 5%    | 50V  |
| C19      | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V | C316     | 1-162-923-11 | CERAMIC CHIP  | 47PF    | 5%    | 50V  |
| C20      | 1-115-467-11 | CERAMIC CHIP | 0.22uF   | 10% | 10V | C318     | 1-104-913-11 | TANTAL. CHIP  | 10uF    | 20%   | 16V  |
| C21      | 1-162-968-11 | CERAMIC CHIP | 0.0047uF | 10% | 50V | C319     | 1-162-792-11 | CERAMIC CHIP  | 100PF   | 5%    | 50V  |
| C22      | 1-107-823-11 | CERAMIC CHIP | 0.47uF   | 10% | 16V | C320     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C25      | 1-115-156-11 | CERAMIC CHIP | 1uF      |     | 10V | C321     | 1-124-779-00 | ELECT CHIP    | 10uF    | 20%   | 16V  |
| C26      | 1-126-204-11 | ELECT CHIP   | 47uF     | 20% | 16V | C322     | 1-162-970-11 | CERAMIC CHIP  | 0.01uF  | 10%   | 25V  |
| C49      | 1-107-826-11 | CERAMIC CHIP | 0.1uF    | 10% | 16V | C323     | 1-163-038-00 | CERAMIC CHIP  | 0.1uF   |       | 25V  |
| C51      | 1-163-038-00 | CERAMIC CHIP | 0.1uF    |     | 25V | C324     | 1-109-982-11 | CERAMIC CHIP  | 1uF     | 10%   | 10V  |
| C100     | 1-126-601-11 | ELECT CHIP   | 2.2uF    | 20% | 50V | C326     | 1-164-004-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 25V  |
| C108     | 1-126-601-11 | ELECT CHIP   | 2.2uF    | 20% | 50V | C327     | 1-115-156-11 | CERAMIC CHIP  | 1uF     |       | 10V  |
| C109     | 1-109-982-11 | CERAMIC CHIP | 1uF      | 10% | 10V | C328     | 1-163-021-11 | CERAMIC CHIP  | 0.01uF  | 10%   | 50V  |
| C111     | 1-107-752-11 | CERAMIC CHIP | 0.1uF    | 10% | 16V | C651     | 1-163-009-11 | CERAMIC CHIP  | 0.001uF | 10%   | 50V  |
| C112     | 1-126-603-11 | ELECT CHIP   | 4.7uF    | 20% | 35V | C652     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C113     | 1-126-603-11 | ELECT CHIP   | 4.7uF    | 20% | 35V | C653     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C114     | 1-124-779-00 | ELECT CHIP   | 10uF     | 20% | 16V | C654     | 1-163-038-00 | CERAMIC CHIP  | 0.1uF   |       | 25V  |
| C115     | 1-162-970-11 | CERAMIC CHIP | 0.01uF   | 10% | 25V | C655     | 1-163-251-11 | CERAMIC CHIP  | 100PF   | 5%    | 50V  |
| C116     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C657     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C117     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C658     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C118     | 1-164-299-11 | CERAMIC CHIP | 0.22uF   | 10% | 25V | C659     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C119     | 1-164-299-11 | CERAMIC CHIP | 0.22uF   | 10% | 25V | C660     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C120     | 1-124-779-00 | ELECT CHIP   | 10uF     | 20% | 16V | C661     | 1-162-964-11 | CERAMIC CHIP  | 0.001uF | 10%   | 50V  |
| C121     | 1-104-329-11 | CERAMIC CHIP | 0.1uF    | 10% | 50V | C700     | 1-107-826-11 | CERAMIC CHIP  | 0.1uF   | 10%   | 16V  |
| C122     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C701     | 1-164-230-11 | CERAMIC CHIP  | 220PF   | 5%    | 50V  |
| C124     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C702     | 1-164-315-11 | CERAMIC CHIP  | 470PF   | 5%    | 50V  |
| C126     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C703     | 1-162-920-11 | CERAMIC CHIP  | 27PF    | 5%    | 50V  |
| C127     | 1-107-823-11 | CERAMIC CHIP | 0.47uF   | 10% | 16V | C704     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C131     | 1-163-251-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C705     | 1-162-970-11 | CERAMIC CHIP  | 0.01uF  | 10%   | 25V  |
| C151     | 1-107-725-11 | CERAMIC CHIP | 0.1uF    | 10% | 16V | C706     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C152     | 1-164-489-11 | CERAMIC CHIP | 0.22uF   | 10% | 16V | C707     | 1-162-919-11 | CERAMIC CHIP  | 22PF    | 5%    | 50V  |
| C200     | 1-126-601-11 | ELECT CHIP   | 0.22uF   | 10% | 16V | C708     | 1-164-156-11 | CERAMIC CHIP  | 0.1uF   |       | 25V  |
| C204     | 1-126-601-11 | ELECT CHIP   | 2.2uF    | 20% | 50V | C709     | 1-164-156-11 | CERAMIC CHIP  | 0.1uF   |       | 25V  |
| C205     | 1-109-982-11 | CERAMIC CHIP | 1uF      | 10% | 10V | C710     | 1-124-779-00 | ELECT CHIP    | 10uF    | 20%   | 16V  |
| C207     | 1-126-603-11 | ELECT CHIP   | 4.7uF    | 20% | 35V | C711     | 1-163-133-00 | CERAMIC CHIP  | 470PF   | 5%    | 50V  |
| C208     | 1-126-603-11 | ELECT CHIP   | 4.7uF    | 20% | 35V | C712     | 1-163-133-00 | CERAMIC CHIP  | 470PF   | 5%    | 50V  |
| C209     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C713     | 1-163-021-11 | CERAMIC CHIP  | 0.01uF  | 10%   | 50V  |
| C210     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C714     | 1-162-964-11 | CERAMIC CHIP  | 0.001uF | 10%   | 50V  |
| C211     | 1-164-299-11 | CERAMIC CHIP | 0.22uF   | 10% | 25V | C717     | 1-126-206-11 | ELECT CHIP    | 100uF   | 20%   | 6.3V |
| C212     | 1-164-299-11 | CERAMIC CHIP | 0.22uF   | 10% | 25V | C718     | 1-126-206-11 | ELECT CHIP    | 100uF   | 20%   | 6.3V |
| C213     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C719     | 1-125-565-11 | DOUBLE LAYERS | 0.22F   |       | 5.5V |
| C214     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C720     | 1-164-156-11 | CERAMIC CHIP  | 0.1uF   |       | 25V  |
| C215     | 1-162-927-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C721     | 1-164-505-11 | CERAMIC CHIP  | 2.2uF   |       | 16V  |
| C231     | 1-163-251-11 | CERAMIC CHIP | 100PF    | 5%  | 50V | C722     | 1-126-395-11 | ELECT         | 22uF    | 20%   | 16V  |
| C251     | 1-107-725-11 | CERAMIC CHIP | 0.1uF    | 10% | 16V | C723     | 1-164-346-11 | CERAMIC CHIP  | 1uF     |       | 16V  |
| C301     | 1-124-779-00 | ELECT CHIP   | 10uF     | 20% | 16V |          |              |               |         |       |      |



| Ref. No. | Part No.     | Description                  |        |     | Remark | Ref. No. | Part No.     | Description                            | Remark |
|----------|--------------|------------------------------|--------|-----|--------|----------|--------------|--|--------|
| C724     | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    | CN700    | 1-794-364-11 | CONNECTOR (PLUG) 16P                   |        |
| C725     | 1-117-681-11 | ELECT CHIP                   | 100uF  | 20% | 16V    | CN821    | 1-750-862-21 | PIN, CONNECTOR (PC BOARD) 5P           |        |
| C726     | 1-109-982-11 | CERAMIC CHIP                 | 1uF    | 10% | 10V    | CN823    | 1-573-355-11 | CONNECTOR, FFC/FPC 15P                 |        |
| C780     | 1-163-038-00 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | CNJ780   | 1-580-907-31 | PLUG, CONNECTOR (BUS CONTROL IN)       |        |
| C802     | 1-107-725-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    | CNP820   | 1-793-277-11 | PLUG, CONNECTOR 16P                    |        |
| C803     | 1-107-725-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    |          |              | < JACK >                               |        |
| C820     | 1-115-772-31 | ELECT                        | 5600uF | 20% | 16V    | CNP101   | 1-774-700-11 | JACK, PIN 6P (BUS AUDIO IN, AUDIO OUT) |        |
| C821     | 1-104-329-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 50V    |          |              | < DIODE >                              |        |
| C822     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D1       | 8-719-422-16 | DIODE MA8039-L-TX                      |        |
| C823     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D100     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C824     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D101     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C825     | 1-104-329-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 50V    | D102     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C826     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D103     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C827     | 1-104-329-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 50V    | D200     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C828     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D201     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C829     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D202     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C830     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D203     | 8-719-079-29 | DIODE PTZ-TE25-22B                     |        |
| C831     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D650     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C832     | 1-162-970-11 | CERAMIC CHIP                 | 0.01uF | 10% | 25V    | D700     | 8-719-914-44 | DIODE DAP202K-T-146                    |        |
| C833     | 1-162-970-11 | CERAMIC CHIP                 | 0.01uF | 10% | 25V    | D701     | 8-719-420-14 | DIODE MA8082-M(TX)                     |        |
| C834     | 1-126-204-11 | ELECT CHIP                   | 47uF   | 20% | 16V    | D702     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C836     | 1-117-681-11 | ELECT CHIP                   | 100uF  | 20% | 16V    | D714     | 8-719-057-80 | DIODE MA8180-M-TX                      |        |
| C837     | 1-117-681-11 | ELECT CHIP                   | 100uF  | 20% | 16V    | D716     | 8-719-914-44 | DIODE DAP202K-T-146                    |        |
| C838     | 1-164-816-11 | CERAMIC CHIP                 | 220PF  | 2%  | 50V    | D717     | 8-719-977-12 | DIODE MA8068-M-TX                      |        |
| C839     | 1-115-416-11 | CERAMIC CHIP                 | 1000PF | 5%  | 25V    | D718     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C840     | 1-162-959-11 | CERAMIC CHIP                 | 330PF  | 5%  | 50V    | D719     | 8-719-977-12 | DIODE MA8068-M-TX                      |        |
| C841     | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    | D721     | 8-719-914-43 | DIODE DAN202K-T-146                    |        |
| C842     | 1-115-416-11 | CERAMIC CHIP                 | 1000PF | 5%  | 25V    | D722     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C843     | 1-162-959-11 | CERAMIC CHIP                 | 330PF  | 5%  | 50V    | D723     | 8-719-422-16 | DIODE MA8039-L-TX                      |        |
| C844     | 1-109-982-11 | CERAMIC CHIP                 | 1uF    | 10% | 10V    | D780     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C845     | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    | D781     | 8-719-017-62 | DIODE MA8068-L-TX                      |        |
| C846     | 1-162-923-11 | CERAMIC CHIP                 | 47PF   | 5%  | 50V    | D782     | 8-719-017-62 | DIODE MA8068-L-TX                      |        |
| C847     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D783     | 8-719-022-90 | DIODE MA8160-M-TX                      |        |
| C848     | 1-135-993-11 | TANTAL. CHIP                 | 33uF   |     | 10V    | D784     | 8-719-022-90 | DIODE MA8160-M-TX                      |        |
| C849     | 1-165-112-11 | CERAMIC CHIP                 | 0.33uF |     | 16V    | D785     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C851     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D786     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C852     | 1-135-993-11 | TANTAL. CHIP                 | 33uF   |     | 10V    | D787     | 8-719-022-90 | DIODE MA8160-M-TX                      |        |
| C854     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D788     | 8-719-914-43 | DIODE DAN202K-T-146                    |        |
| C856     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D789     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C857     | 1-104-851-11 | TANTAL. CHIP                 | 10uF   | 20% | 10V    | D820     | 8-719-049-38 | DIODE 1N5404TU                         |        |
| C858     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D821     | 8-719-420-51 | DIODE MA729-TX                         |        |
| C859     | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    | D822     | 8-719-053-18 | DIODE 1SR154-400TE-25                  |        |
| C860     | 1-164-156-11 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D824     | 8-719-053-18 | DIODE 1SR154-400TE-25                  |        |
| C861     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D825     | 8-719-053-18 | DIODE 1SR154-400TE-25                  |        |
| C862     | 1-124-779-00 | ELECT CHIP                   | 10uF   | 20% | 16V    | D826     | 8-719-057-80 | DIODE MA8180-M-TX                      |        |
| C863     | 1-107-826-11 | CERAMIC CHIP                 | 0.1uF  | 10% | 16V    | D827     | 8-719-977-12 | DIODE MA8068-M-TX                      |        |
| C864     | 1-104-913-11 | TANTAL. CHIP                 | 10uF   | 20% | 16V    | D828     | 8-719-073-01 | DIODE MA111-TX                         |        |
| C867     | 1-163-038-00 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D829     | 8-719-420-51 | DIODE MA729-TX                         |        |
| C868     | 1-126-395-11 | ELECT                        | 22uF   | 20% | 16V    | D830     | 8-719-053-18 | DIODE 1SR154-400TE-25                  |        |
| C869     | 1-163-038-00 | CERAMIC CHIP                 | 0.1uF  |     | 25V    | D831     | 8-719-053-18 | DIODE 1SR154-400TE-25                  |        |
|          |              | < CONNECTOR >                |        |     |        | D832     | 8-719-977-12 | DIODE MA8068-M-TX                      |        |
| CN100    | 1-794-513-21 | CONNECTOR, FFC/FPC (ZIF) 35P |        |     |        |          |              |  |        |



# MAIN

| Ref. No.         | Part No.     | Description               | Remark | Ref. No.     | Part No.     | Description                  | Remark |
|------------------|--------------|---------------------------|--------|--------------|--------------|------------------------------|--------|
| D833             | 8-719-420-51 | DIODE MA729-TX            |        | Q103         | 8-729-047-71 | TRANSISTOR FMG12-T-148       |        |
| D834             | 8-719-420-51 | DIODE MA729-TX            |        | Q201         | 8-729-047-71 | TRANSISTOR FMG12-T-148       |        |
| D835             | 8-719-976-96 | DIODE MA8047-H-TX         |        | Q300         | 8-729-900-53 | TRANSISTOR DTC114EKA-T146    |        |
| D836             | 8-719-055-30 | DIODE D1FS4A-TA           |        | Q651         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| D837             | 8-719-055-30 | DIODE D1FS4A-TA           |        | Q700         | 1-801-806-11 | TRANSISTOR DTC144EK-T146     |        |
| D838             | 8-719-423-35 | DIODE MA8120-H-TX         |        | Q701         | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR |        |
| D839             | 8-719-423-21 | DIODE MA8110-L-TX         |        | Q702         | 8-729-924-73 | TRANSISTOR FMA9-T1           |        |
| D840             | 8-719-914-43 | DIODE DAN202K-T-146       |        | Q703         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| D841             | 8-719-423-15 | DIODE MA8110-H-TX         |        | Q704         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| < FERRITE BEAD > |              |                           |        | Q705         | 8-729-026-49 | TRANSISTOR 2SA1037AK-T146-QR |        |
| FB301            | 1-414-235-11 | FERRITE BEAD INDUCTOR     |        | Q780         | 8-729-027-23 | TRANSISTOR DTA114EKA-T146    |        |
| FB302            | 1-414-235-11 | FERRITE BEAD INDUCTOR     |        | Q781         | 8-729-900-53 | TRANSISTOR DTC114EKA-T146    |        |
| FB303            | 1-414-235-11 | FERRITE BEAD INDUCTOR     |        | Q782         | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR |        |
| FB304            | 1-414-230-11 | FERRITE BEAD INDUCTOR     |        | Q783         | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR |        |
| FB601            | 1-414-595-11 | FERRITE BEAD INDUCTOR     |        | Q784         | 8-729-027-23 | TRANSISTOR DTA114EKA-T146    |        |
| < IC >           |              |                           |        | Q821         | 8-729-019-00 | TRANSISTOR 2SD2394-G         |        |
| IC102            | 8-759-653-27 | IC TDA7402TR              |        | Q822         | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR |        |
| IC104            | 8-759-663-88 | IC TA8268H                |        | Q823         | 8-729-822-84 | TRANSISTOR 2SB1202FAT-TL     |        |
| IC280            | 8-759-661-47 | IC BA4908-V3              |        | Q824         | 8-729-900-53 | TRANSISTOR DTC114EKA-T146    |        |
| IC284            | 8-719-679-07 | IC NJM2370U05-TE2         |        | Q825         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| IC300            | 8-759-667-88 | IC AK4523VF-E2            |        | Q826         | 8-729-900-53 | TRANSISTOR DTC114EKA-T146    |        |
| IC301            | 8-759-096-87 | IC TC7WU04FU(Te12R)       |        | Q827         | 8-729-822-84 | TRANSISTOR 2SB1202FAT-TL     |        |
| IC650            | 8-759-681-72 | IC HD6432355A18F          |        | Q828         | 8-729-106-60 | TRANSISTOR 2SB1132-T101-QR   |        |
| IC651            | 8-759-277-63 | IC TC7W14FU(Te12R)        |        | Q829         | 8-729-900-53 | TRANSISTOR DTC114EKA-T146    |        |
| IC652            | 8-759-392-22 | IC BA3834F                |        | Q830         | 8-729-822-84 | TRANSISTOR 2SB1202FAT-TL     |        |
| IC700            | 8-759-679-62 | IC MB90574PMT-G-258-BND   |        | Q831         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| IC701            | 8-759-363-81 | IC XC61AN4002PR           |        | Q832         | 8-729-807-12 | TRANSISTOR 2SD1802FAT-TL     |        |
| IC702            | 8-759-495-76 | IC RN5VD33AA-TL           |        | Q833         | 8-729-920-85 | TRANSISTOR 2SD1664-T101-QR   |        |
| IC780            | 8-759-449-89 | IC BA8270F-E2             |        | Q834         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| IC801            | 8-759-990-43 | IC TL1451ACDB-E20         |        | Q835         | 8-729-019-00 | TRANSISTOR 2SD2394-G         |        |
| IC802            | 8-759-460-72 | IC BA033FP-E2             |        | Q836         | 8-729-020-67 | TRANSISTOR XN1A312-TX        |        |
| < JACK >         |              |                           |        | < RESISTOR > |              |                              |        |
| J1               | 1-785-503-11 | JACK (ANT)                |        | R1           | 1-216-864-11 | METAL CHIP 0 5% 1/16W        |        |
| J700             | 1-566-822-41 | JACK (REMOTE IN)          |        | R2           | 1-216-841-11 | METAL CHIP 47K 5% 1/16W      |        |
| < COIL >         |              |                           |        | R3           | 1-216-825-11 | METAL CHIP 2.2K 5% 1/16W     |        |
| L280             | 1-419-476-11 | INDUCTOR 250uH            |        | R4           | 1-216-839-11 | METAL CHIP 33K 5% 1/16W      |        |
| L281             | 1-412-058-11 | INDUCTOR CHIP 10uH        |        | R5           | 1-216-864-11 | METAL CHIP 0 5% 1/16W        |        |
| L286             | 1-412-055-11 | INDUCTOR CHIP 3.3uH       |        | R6           | 1-216-821-11 | METAL CHIP 1K 5% 1/16W       |        |
| L650             | 1-412-064-11 | INDUCTOR CHIP 100uH       |        | R7           | 1-216-295-00 | SHORT 0                      |        |
| L700             | 1-412-058-11 | INDUCTOR CHIP 10uH        |        | R8           | 1-216-864-11 | METAL CHIP 0 5% 1/16W        |        |
| L801             | 1-414-408-11 | INDUCTOR CHIP 1uH         |        | R11          | 1-216-809-11 | METAL CHIP 100 5% 1/16W      |        |
| L802             | 1-469-388-21 | INDUCTOR 100uH            |        | R12          | 1-216-809-11 | METAL CHIP 100 5% 1/16W      |        |
| L803             | 1-469-388-21 | INDUCTOR 100uH            |        | R13          | 1-216-864-11 | METAL CHIP 0 5% 1/16W        |        |
| < TRANSISTOR >   |              |                           |        | R14          | 1-216-864-11 | METAL CHIP 0 5% 1/16W        |        |
| Q1               | 8-729-920-21 | TRANSISTOR DTC314TK-T-146 |        | R15          | 1-216-864-11 | METAL CHIP 0 5% 1/16W        |        |
| Q2               | 8-729-920-21 | TRANSISTOR DTC314TK-T-146 |        | R17          | 1-216-837-11 | METAL CHIP 22K 5% 1/16W      |        |
| Q3               | 8-729-020-67 | TRANSISTOR XN1A312-TX     |        | R18          | 1-216-841-11 | METAL CHIP 47K 5% 1/16W      |        |
| Q102             | 8-729-047-71 | TRANSISTOR FMG12-T-148    |        | R20          | 1-216-025-11 | RES-CHIP 100 5% 1/10W        |        |
|                  |              |                           |        | R21          | 1-216-025-11 | RES-CHIP 100 5% 1/10W        |        |
|                  |              |                           |        | R22          | 1-216-295-00 | SHORT 0                      |        |
|                  |              |                           |        | R105         | 1-216-821-11 | METAL CHIP 1K 5% 1/16W       |        |



| Ref. No. | Part No.     | Description |      |    | Remark | Ref. No. | Part No.     | Description |      |      | Remark |
|----------|--------------|-------------|------|----|--------|----------|--------------|-------------|------|------|--------|
| R110     | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W  | R672     | 1-216-864-11 | METAL CHIP  | 0    | 5%   | 1/16W  |
| R111     | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W  | R702     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R112     | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W  | R703     | 1-216-097-11 | RES-CHIP    | 100K | 5%   | 1/10W  |
| R113     | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W  | R704     | 1-216-815-11 | METAL CHIP  | 330  | 5%   | 1/16W  |
| R114     | 1-216-829-11 | METAL CHIP  | 4.7K | 5% | 1/16W  | R705     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R115     | 1-216-834-11 | METAL CHIP  | 12K  | 5% | 1/16W  | R707     | 1-216-841-11 | METAL CHIP  | 47K  | 5%   | 1/16W  |
| R116     | 1-216-829-11 | METAL CHIP  | 4.7K | 5% | 1/16W  | R709     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R117     | 1-216-834-11 | METAL CHIP  | 12K  | 5% | 1/16W  | R710     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R118     | 1-216-833-11 | RES-CHIP    | 10K  | 5% | 1/16W  | R711     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R119     | 1-216-809-11 | METAL CHIP  | 100  | 5% | 1/16W  | R713     | 1-216-864-11 | METAL CHIP  | 0    | 5%   | 1/16W  |
| R205     | 1-216-821-11 | METAL CHIP  | 1K   | 5% | 1/16W  | R714     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R210     | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W  | R715     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R211     | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W  | R716     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R212     | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W  | R717     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R213     | 1-216-081-00 | METAL CHIP  | 22K  | 5% | 1/10W  | R718     | 1-216-097-11 | RES-CHIP    | 100K | 5%   | 1/10W  |
| R214     | 1-216-829-11 | METAL CHIP  | 4.7K | 5% | 1/16W  | R719     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R215     | 1-216-834-11 | METAL CHIP  | 12K  | 5% | 1/16W  | R720     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R216     | 1-216-829-11 | METAL CHIP  | 4.7K | 5% | 1/16W  | R721     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R217     | 1-216-834-11 | METAL CHIP  | 12K  | 5% | 1/16W  | R722     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R218     | 1-216-833-11 | RES-CHIP    | 10K  | 5% | 1/16W  | R723     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R219     | 1-216-809-11 | METAL CHIP  | 100  | 5% | 1/16W  | R724     | 1-216-855-11 | METAL CHIP  | 680K | 5%   | 1/16W  |
| R300     | 1-216-821-11 | METAL CHIP  | 1K   | 5% | 1/16W  | R725     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R302     | 1-216-864-11 | METAL CHIP  | 0    | 5% | 1/16W  | R726     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R303     | 1-216-864-11 | METAL CHIP  | 0    | 5% | 1/16W  | R727     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R307     | 1-216-025-11 | RES-CHIP    | 100  | 5% | 1/10W  | R728     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R308     | 1-216-025-11 | RES-CHIP    | 100  | 5% | 1/10W  | R729     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R309     | 1-216-821-11 | METAL CHIP  | 1K   | 5% | 1/16W  | R730     | 1-216-825-11 | METAL CHIP  | 2.2K | 5%   | 1/16W  |
| R310     | 1-216-825-11 | METAL CHIP  | 2.2K | 5% | 1/16W  | R731     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R311     | 1-216-833-11 | RES-CHIP    | 10K  | 5% | 1/16W  | R733     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R312     | 1-216-025-11 | RES-CHIP    | 100  | 5% | 1/10W  | R734     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R313     | 1-216-308-00 | METAL CHIP  | 4.7  | 5% | 1/10W  | R735     | 1-216-057-00 | METAL CHIP  | 2.2K | 5%   | 1/10W  |
| R314     | 1-216-049-11 | RES-CHIP    | 1K   | 5% | 1/10W  | R736     | 1-216-057-00 | METAL CHIP  | 2.2K | 5%   | 1/10W  |
| R315     | 1-216-825-11 | METAL CHIP  | 2.2K | 5% | 1/16W  | R737     | 1-216-089-11 | RES-CHIP    | 47K  | 5%   | 1/10W  |
| R316     | 1-216-857-11 | METAL CHIP  | 1M   | 5% | 1/16W  | R738     | 1-216-089-11 | RES-CHIP    | 47K  | 5%   | 1/10W  |
| R601     | 1-216-295-00 | SHORT       | 0    |    |        | R739     | 1-216-222-00 | RES-CHIP    | 10K  | 5%   | 1/8W   |
| R603     | 1-216-813-11 | METAL CHIP  | 220  | 5% | 1/16W  | R740     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R651     | 1-216-845-11 | METAL CHIP  | 100K | 5% | 1/16W  | R741     | 1-216-675-11 | METAL CHIP  | 10K  | 0.5% | 1/10W  |
| R652     | 1-216-845-11 | METAL CHIP  | 100K | 5% | 1/16W  | R742     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R653     | 1-216-817-11 | METAL CHIP  | 470  | 5% | 1/16W  | R743     | 1-216-675-11 | METAL CHIP  | 10K  | 0.5% | 1/10W  |
| R654     | 1-216-813-11 | METAL CHIP  | 220  | 5% | 1/16W  | R744     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R655     | 1-216-864-11 | METAL CHIP  | 0    | 5% | 1/16W  | R745     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R656     | 1-216-849-11 | METAL CHIP  | 220K | 5% | 1/16W  | R746     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R660     | 1-216-097-11 | RES-CHIP    | 100K | 5% | 1/10W  | R747     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R661     | 1-216-825-11 | METAL CHIP  | 2.2K | 5% | 1/16W  | R748     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R662     | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W  | R749     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R663     | 1-216-033-00 | METAL CHIP  | 220  | 5% | 1/10W  | R750     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R664     | 1-216-813-11 | METAL CHIP  | 220  | 5% | 1/16W  | R751     | 1-216-049-11 | RES-CHIP    | 1K   | 5%   | 1/10W  |
| R665     | 1-216-845-11 | METAL CHIP  | 100K | 5% | 1/16W  | R752     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R666     | 1-216-845-11 | METAL CHIP  | 100K | 5% | 1/16W  | R753     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R667     | 1-216-845-11 | METAL CHIP  | 100K | 5% | 1/16W  | R754     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R668     | 1-216-845-11 | METAL CHIP  | 100K | 5% | 1/16W  | R756     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R669     | 1-216-833-11 | RES-CHIP    | 10K  | 5% | 1/16W  | R757     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R670     | 1-216-842-11 | METAL CHIP  | 56K  | 5% | 1/16W  |          |              |             |      |      |        |



## MAIN

## RELAY

| Ref. No. | Part No.     | Description |      |      | Remark |
|----------|--------------|-------------|------|------|--------|
| R758     | 1-218-716-11 | METAL CHIP  | 10K  | 0.5% | 1/16W  |
| R759     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R760     | 1-218-716-11 | METAL CHIP  | 10K  | 0.5% | 1/16W  |
| R761     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R762     | 1-216-853-11 | METAL CHIP  | 470K | 5%   | 1/16W  |
| R763     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R764     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R765     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R766     | 1-216-837-11 | METAL CHIP  | 22K  | 5%   | 1/16W  |
| R767     | 1-216-847-11 | METAL CHIP  | 150K | 5%   | 1/16W  |
| R768     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R769     | 1-216-864-11 | METAL CHIP  | 0    | 5%   | 1/16W  |
| R770     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R771     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R780     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R781     | 1-216-809-11 | METAL CHIP  | 100  | 5%   | 1/16W  |
| R782     | 1-216-089-11 | RES-CHIP    | 47K  | 5%   | 1/10W  |
| R783     | 1-216-097-11 | RES-CHIP    | 100K | 5%   | 1/10W  |
| R784     | 1-216-089-11 | RES-CHIP    | 47K  | 5%   | 1/10W  |
| R785     | 1-216-097-11 | RES-CHIP    | 100K | 5%   | 1/10W  |
| R786     | 1-216-150-11 | RES-CHIP    | 10   | 5%   | 1/8W   |
| R787     | 1-216-841-11 | METAL CHIP  | 47K  | 5%   | 1/16W  |
| R802     | 1-216-025-11 | RES-CHIP    | 100  | 5%   | 1/10W  |
| R803     | 1-216-821-11 | METAL CHIP  | 1K   | 5%   | 1/16W  |
| R805     | 1-216-864-11 | METAL CHIP  | 0    | 5%   | 1/16W  |
| R821     | 1-216-073-00 | METAL CHIP  | 10K  | 5%   | 1/10W  |
| R822     | 1-216-198-00 | RES-CHIP    | 1K   | 5%   | 1/8W   |
| R823     | 1-216-825-11 | METAL CHIP  | 2.2K | 5%   | 1/16W  |
| R824     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R826     | 1-216-839-11 | METAL CHIP  | 33K  | 5%   | 1/16W  |
| R827     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R828     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R829     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R830     | 1-216-833-11 | RES-CHIP    | 10K  | 5%   | 1/16W  |
| R831     | 1-216-057-00 | METAL CHIP  | 2.2K | 5%   | 1/10W  |
| R832     | 1-218-716-11 | METAL CHIP  | 10K  | 0.5% | 1/16W  |
| R833     | 1-218-732-11 | METAL CHIP  | 47K  | 0.5% | 1/16W  |
| R834     | 1-216-835-11 | METAL CHIP  | 15K  | 5%   | 1/16W  |
| R835     | 1-216-835-11 | METAL CHIP  | 15K  | 5%   | 1/16W  |
| R836     | 1-216-839-11 | METAL CHIP  | 33K  | 5%   | 1/16W  |
| R837     | 1-216-839-11 | METAL CHIP  | 33K  | 5%   | 1/16W  |
| R838     | 1-216-839-11 | METAL CHIP  | 33K  | 5%   | 1/16W  |
| R839     | 1-216-839-11 | METAL CHIP  | 33K  | 5%   | 1/16W  |
| R840     | 1-216-845-11 | METAL CHIP  | 100K | 5%   | 1/16W  |
| R841     | 1-216-829-11 | METAL CHIP  | 4.7K | 5%   | 1/16W  |
| R842     | 1-216-033-00 | METAL CHIP  | 220  | 5%   | 1/10W  |
| R843     | 1-216-061-00 | METAL CHIP  | 3.3K | 5%   | 1/10W  |
| R844     | 1-216-061-00 | METAL CHIP  | 3.3K | 5%   | 1/10W  |
| R845     | 1-216-061-00 | METAL CHIP  | 3.3K | 5%   | 1/10W  |
| R846     | 1-218-716-11 | METAL CHIP  | 10K  | 0.5% | 1/16W  |
| R847     | 1-218-704-11 | METAL CHIP  | 3.3K | 0.5% | 1/16W  |
| R850     | 1-216-073-00 | METAL CHIP  | 10K  | 5%   | 1/10W  |
| R851     | 1-216-029-00 | METAL CHIP  | 150  | 5%   | 1/10W  |
| R852     | 1-216-182-00 | RES-CHIP    | 220  | 5%   | 1/8W   |
| R853     | 1-216-190-00 | RES-CHIP    | 470  | 5%   | 1/8W   |

| Ref. No.                  | Part No.     | Description                     |      |      | Remark |
|---------------------------|--------------|---------------------------------|------|------|--------|
| R856                      | 1-216-033-00 | METAL CHIP                      | 220  | 5%   | 1/10W  |
| R857                      | 1-216-061-00 | METAL CHIP                      | 3.3K | 5%   | 1/10W  |
| R858                      | 1-216-061-00 | METAL CHIP                      | 3.3K | 5%   | 1/10W  |
| R859                      | 1-216-061-00 | METAL CHIP                      | 3.3K | 5%   | 1/10W  |
| R860                      | 1-218-716-11 | METAL CHIP                      | 10K  | 0.5% | 1/16W  |
| R861                      | 1-218-704-11 | METAL CHIP                      | 3.3K | 0.5% | 1/16W  |
| R862                      | 1-216-190-00 | RES-CHIP                        | 470  | 5%   | 1/8W   |
| R864                      | 1-216-845-11 | METAL CHIP                      | 100K | 5%   | 1/16W  |
| R865                      | 1-216-295-00 | SHORT                           | 0    |      |        |
| R866                      | 1-216-049-11 | RES-CHIP                        | 1K   | 5%   | 1/10W  |
| R867                      | 1-216-041-00 | METAL CHIP                      | 470  | 5%   | 1/10W  |
| R869                      | 1-216-295-00 | SHORT                           | 0    |      |        |
| < NETWORK RESISTOR >      |              |                                 |      |      |        |
| RB700                     | 1-233-576-11 | RES, CHIP NETWORK               | 100  |      |        |
| < SWITCH >                |              |                                 |      |      |        |
| S700                      | 1-571-754-31 | SWITCH, PUSH (1 KEY) (NOSE DET) |      |      |        |
| < TUNER >                 |              |                                 |      |      |        |
| TU1                       | A-3220-738-A | TUNER UNIT (TUX-020)            |      |      |        |
| < THERMISTOR (POSITIVE) > |              |                                 |      |      |        |
| TH780                     | 1-801-792-21 | THERMISTOR, POSITIVE            |      |      |        |
| < VIBRATOR >              |              |                                 |      |      |        |
| X300                      | 1-781-905-21 | VIBRATOR, CRYSTAL (22.5792MHz)  |      |      |        |
| X650                      | 1-781-565-11 | VIBRATOR, CRYSTAL (18.432MHz)   |      |      |        |
| X700                      | 1-760-928-21 | VIBRATOR, CRYSTAL (32.768kHz)   |      |      |        |
| X701                      | 1-781-907-21 | VIBRATOR, CRYSTAL (3.6864MHz)   |      |      |        |
| *****                     |              |                                 |      |      |        |
| *                         | 1-678-397-11 | RELAY BOARD                     |      |      |        |
| *****                     |              |                                 |      |      |        |
| < CONNECTOR >             |              |                                 |      |      |        |
| CN800                     | 1-794-064-11 | SOCKET, CONNECTOR 14P           |      |      |        |
| CN801                     | 1-794-363-11 | CONNECTOR (RECEPTACLE) 16P      |      |      |        |
| * CN802                   | 1-569-775-21 | PIN, CONNECTOR (SMD) 5P         |      |      |        |
| < DIODE >                 |              |                                 |      |      |        |
| D800                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D801                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D802                      | 8-719-057-80 | DIODE MA8180-M-TX               |      |      |        |
| D803                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D804                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D805                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D806                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D807                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D808                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D809                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D810                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |
| D811                      | 8-719-977-12 | DIODE MA8068-M-TX               |      |      |        |



## RELAY

## SENSOR

## SERVO

| Ref. No.       | Part No.     | Description                                | Remark |
|----------------|--------------|--|--------|
|                |              | < DIODE >                                  |        |
| LED800         | 8-719-077-75 | LED BR1101F-TR (DISC IN)                   |        |
|                |              | < SWITCH >                                 |        |
| LSW800         | 1-771-883-11 | SWITCH, TACTILE (WITH LED) (▲)             |        |
|                |              | < RESISTOR >                               |        |
| R800           | 1-216-041-00 | METAL CHIP 470 5% 1/10W                    |        |
|                |              | < SWITCH >                                 |        |
| S800           | 1-572-921-11 | SWITCH, KEY BOARD (RESET)                  |        |
| *****          |              |  |        |
| A-3317-305-A   |              | SENSOR BOARD, COMPLETE                     |        |
| *****          |              |  |        |
|                |              | < CAPACITOR >                              |        |
| C553           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C554           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C555           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C556           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C557           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C558           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C559           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
|                |              | < CONNECTOR >                              |        |
| CN550          | 1-691-381-11 | CONNECTOR, FFC/FPC 17P                     |        |
| * CN551        | 1-770-619-11 | PIN, CONNECTOR 2P                          |        |
| CN552          | 1-770-619-41 | PIN, CONNECTOR 2P                          |        |
|                |              | < SWITCH >                                 |        |
| SW550          | 1-572-467-61 | SWITCH, PUSH (1 KEY) (LIMIT IN)            |        |
| SW551          | 1-771-606-21 | SWITCH, 2P PUSH (2 KEY) (PROTECT, REFLECT) |        |
| SW552          | 1-572-688-11 | SWITCH, PUSH (1 KEY) (DISC IN)             |        |
| SW553          | 1-692-849-21 | SWITCH, PUSH (1 KEY) (PACK IN)             |        |
| SW554          | 1-572-288-21 | SWITCH, PUSH (REC-P)                       |        |
| SW555          | 1-572-688-11 | SWITCH, PUSH (1 KEY) (PLAY-P)              |        |
| *****          |              |  |        |
| * A-3326-079-A |              | SERVO MOUNTED BOARD, COMPLETE              |        |
| *****          |              |  |        |
|                |              | < CAPACITOR >                              |        |
| C400           | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V                |        |
| C401           | 1-104-852-11 | TANTAL. CHIP 22uF 20% 10V                  |        |
| C402           | 1-162-927-11 | CERAMIC CHIP 100PF 5% 50V                  |        |
| C403           | 1-162-927-11 | CERAMIC CHIP 100PF 5% 50V                  |        |
| C404           | 1-162-927-11 | CERAMIC CHIP 100PF 5% 50V                  |        |
| C406           | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V                |        |
| C407           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |
| C408           | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V                 |        |

| Ref. No. | Part No.     | Description                   | Remark |
|----------|--------------|-------------------------------|--------|
| C410     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C411     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C414     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C415     | 1-107-823-11 | CERAMIC CHIP 0.47uF 10% 16V   |        |
| C416     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C417     | 1-162-927-11 | CERAMIC CHIP 100PF 5% 50V     |        |
| C418     | 1-162-968-11 | CERAMIC CHIP 0.0047uF 10% 50V |        |
| C419     | 1-107-823-11 | CERAMIC CHIP 0.47uF 10% 16V   |        |
| C420     | 1-164-245-11 | CERAMIC CHIP 0.015uF 10% 25V  |        |
| C423     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C424     | 1-109-982-11 | CERAMIC CHIP 1uF 10% 10V      |        |
| C425     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C426     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C428     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C429     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C440     | 1-104-852-11 | TANTAL. CHIP 22uF 20% 10V     |        |
| C441     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C443     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C444     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C445     | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% 25V  |        |
| C446     | 1-162-964-11 | CERAMIC CHIP 0.001uF 10% 50V  |        |
| C447     | 1-162-969-11 | CERAMIC CHIP 0.0068uF 10% 25V |        |
| C450     | 1-164-677-11 | CERAMIC CHIP 0.033uF 10% 16V  |        |
| C452     | 1-110-563-11 | CERAMIC CHIP 0.068uF 10% 16V  |        |
| C453     | 1-162-968-11 | CERAMIC CHIP 0.0047uF 10% 50V |        |
| C454     | 1-107-682-11 | CERAMIC CHIP 1uF 10% 16V      |        |
| C457     | 1-162-966-11 | CERAMIC CHIP 0.0022uF 10% 50V |        |
| C458     | 1-164-227-11 | CERAMIC CHIP 0.022uF 10% 25V  |        |
| C459     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C460     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C462     | 1-104-851-11 | TANTAL. CHIP 10uF 20% 10V     |        |
| C467     | 1-115-339-11 | CERAMIC CHIP 0.1uF 10% 50V    |        |
| C469     | 1-115-339-11 | CERAMIC CHIP 0.1uF 10% 50V    |        |
| C470     | 1-115-339-11 | CERAMIC CHIP 0.1uF 10% 50V    |        |
| C471     | 1-104-852-11 | TANTAL. CHIP 22uF 20% 10V     |        |
| C472     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C473     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C474     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C475     | 1-104-851-11 | TANTAL. CHIP 10uF 20% 10V     |        |
| C510     | 1-164-611-11 | CERAMIC CHIP 0.001uF 10% 500V |        |
| C511     | 1-107-836-11 | ELECT CHIP 22uF 20% 8V        |        |
| C513     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C516     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C517     | 1-104-913-11 | TANTAL. CHIP 10uF 20% 16V     |        |
| C520     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C524     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C527     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10% 25V   |        |
| C528     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C529     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C530     | 1-119-751-11 | TANTAL. CHIP 22uF 20% 16V     |        |
| C533     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |
| C534     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10% 16V    |        |



| Ref. No.         | Part No.     | Description                  | Remark | Ref. No.     | Part No.     | Description          | Remark |
|------------------|--------------|------------------------------|--------|--------------|--------------|----------------------|--------|
| < CONNECTOR >    |              |                              |        | < RESISTOR > |              |                      |        |
| CN400            | 1-785-771-21 | CONNECTOR, FFC/FPC (ZIF) 35P |        | R400         | 1-216-809-11 | METAL CHIP 100 5%    | 1/16W  |
| CN401            | 1-774-930-21 | CONNECTOR, FFC/FPC 51P       |        | R401         | 1-216-833-11 | RES-CHIP 10K 5%      | 1/16W  |
| CN440            | 1-573-361-11 | CONNECTOR, FFC/FPC 21P       |        | R402         | 1-216-845-11 | METAL CHIP 100K 5%   | 1/16W  |
| CN510            | 1-691-372-21 | CONNECTOR, FFC/FPC 8P        |        | R403         | 1-216-855-11 | METAL CHIP 680K 5%   | 1/16W  |
| CN520            | 1-691-381-11 | CONNECTOR, FFC/FPC 17P       |        | R404         | 1-216-809-11 | METAL CHIP 100 5%    | 1/16W  |
| < DIODE >        |              |                              |        | R408         | 1-216-827-11 | METAL CHIP 3.3K 5%   | 1/16W  |
| D440             | 8-719-988-61 | DIODE 1SS355TE-17            |        | R409         | 1-216-821-11 | METAL CHIP 1K 5%     | 1/16W  |
| D441             | 8-719-988-61 | DIODE 1SS355TE-17            |        | R411         | 1-216-821-11 | METAL CHIP 1K 5%     | 1/16W  |
| D510             | 8-719-046-86 | DIODE F1J6TP                 |        | R412         | 1-216-811-11 | METAL CHIP 150 5%    | 1/16W  |
| D511             | 8-719-046-86 | DIODE F1J6TP                 |        | R413         | 1-216-819-11 | METAL CHIP 680 5%    | 1/16W  |
| D520             | 8-719-420-14 | DIODE MA8082-M (TX)          |        | R414         | 1-216-853-11 | METAL CHIP 470K 5%   | 1/16W  |
| < FERRITE BEAD > |              |                              |        | R415         | 1-216-829-11 | METAL CHIP 4.7K 5%   | 1/16W  |
| FB443            | 1-414-235-22 | FERRITE BEAD INDUCTOR        |        | R416         | 1-216-829-11 | METAL CHIP 4.7K 5%   | 1/16W  |
| FB444            | 1-414-235-22 | FERRITE BEAD INDUCTOR        |        | R420         | 1-216-809-11 | METAL CHIP 100 5%    | 1/16W  |
| < IC >           |              |                              |        | R421         | 1-216-857-11 | METAL CHIP 1M 5%     | 1/16W  |
| IC400            | 8-752-384-47 | IC CXD2652AR                 |        | R440         | 1-218-704-11 | METAL CHIP 3.3K 0.5% | 1/16W  |
| IC401            | 8-759-538-44 | IC MSM51V17400D-10TK-FS      |        | R441         | 1-218-708-11 | METAL CHIP 4.7K 0.5% | 1/16W  |
| IC402            | 8-759-661-26 | IC AT24C16N-10SI-TR          |        | R442         | 1-216-065-11 | RES-CHIP 4.7K 5%     | 1/10W  |
| IC403            | 8-759-096-87 | IC TC7WU04FU(Te12R)          |        | R443         | 1-216-065-11 | RES-CHIP 4.7K 5%     | 1/10W  |
| IC440            | 8-752-080-95 | IC CXA2523AR                 |        | R444         | 1-216-073-00 | METAL CHIP 10K 5%    | 1/10W  |
| IC442            | 8-729-903-10 | TRANSISTOR FMW1-T-148        |        | R446         | 1-218-700-11 | METAL CHIP 2.2K 0.5% | 1/16W  |
| IC510            | 8-759-523-48 | IC TC74ACT540FT(EL)          |        | R447         | 1-218-700-11 | METAL CHIP 2.2K 0.5% | 1/16W  |
| IC520            | 8-759-430-25 | IC BH6511FS-E2               |        | R448         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| IC521            | 8-759-040-83 | IC BA6287F-T1                |        | R449         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| < COIL >         |              |                              |        | R450         | 1-216-853-11 | METAL CHIP 470K 5%   | 1/16W  |
| L400             | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R451         | 1-218-700-11 | METAL CHIP 2.2K 0.5% | 1/16W  |
| L401             | 1-500-245-11 | FERRITE BEAD INDUCTOR        |        | R452         | 1-216-833-11 | RES-CHIP 10K 5%      | 1/16W  |
| L440             | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R453         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| L442             | 1-414-234-22 | FERRITE BEAD INDUCTOR        |        | R454         | 1-216-845-11 | METAL CHIP 100K 5%   | 1/16W  |
| L443             | 1-414-234-22 | FERRITE BEAD INDUCTOR        |        | R455         | 1-216-827-11 | METAL CHIP 3.3K 5%   | 1/16W  |
| L444             | 1-414-234-22 | FERRITE BEAD INDUCTOR        |        | R456         | 1-216-833-11 | RES-CHIP 10K 5%      | 1/16W  |
| < TRANSISTOR >   |              |                              |        | R457         | 1-216-827-11 | METAL CHIP 3.3K 5%   | 1/16W  |
| Q400             | 8-729-230-49 | TRANSISTOR 2SC2712Y-TE85L    |        | R458         | 1-216-833-11 | RES-CHIP 10K 5%      | 1/16W  |
| Q440             | 8-729-900-53 | TRANSISTOR DTC114EKA-T146    |        | R459         | 1-216-845-11 | METAL CHIP 100K 5%   | 1/16W  |
| Q441             | 8-729-106-60 | TRANSISTOR 2SB1132-T101-QR   |        | R460         | 1-216-833-11 | RES-CHIP 10K 5%      | 1/16W  |
| Q442             | 8-729-028-91 | TRANSISTOR DTA144EUA-T106    |        | R461         | 1-216-833-11 | RES-CHIP 10K 5%      | 1/16W  |
| Q443             | 8-729-101-07 | TRANSISTOR 2SB798-T1DK       |        | R462         | 1-216-841-11 | METAL CHIP 47K 5%    | 1/16W  |
| Q444             | 8-729-028-91 | TRANSISTOR DTA144EUA-T106    |        | R463         | 1-216-809-11 | METAL CHIP 100 5%    | 1/16W  |
| Q445             | 8-729-028-99 | TRANSISTOR DTC114YUA-T106    |        | R464         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| Q446             | 8-729-028-99 | TRANSISTOR DTC114YUA-T106    |        | R465         | 1-216-819-11 | METAL CHIP 680 5%    | 1/16W  |
| Q447             | 8-729-026-53 | TRANSISTOR 2SA1576A-T106-QR  |        | R466         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| Q510             | 8-729-042-92 | FET 2SK1470-TD               |        | R467         | 1-216-815-11 | METAL CHIP 330 5%    | 1/16W  |
| Q511             | 8-729-042-91 | FET 2SJ190-TD                |        | R469         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| Q512             | 8-729-028-96 | TRANSISTOR DTC114EUT106      |        | R470         | 1-216-864-11 | METAL CHIP 0 5%      | 1/16W  |
| Q520             | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR |        | R471         | 1-218-688-11 | METAL CHIP 680 0.5%  | 1/16W  |
|                  |              |                              |        | R472         | 1-216-829-11 | METAL CHIP 4.7K 5%   | 1/16W  |
|                  |              |                              |        | R473         | 1-216-097-11 | RES-CHIP 100K 5%     | 1/10W  |
|                  |              |                              |        | R474         | 1-219-724-11 | METAL CHIP 1 1%      | 1/4W   |
|                  |              |                              |        | R476         | 1-220-149-11 | REGISTER 2.2 10%     | 1/2W   |
|                  |              |                              |        | R478         | 1-216-065-11 | RES-CHIP 4.7K 5%     | 1/10W  |
|                  |              |                              |        | R479         | 1-216-853-11 | METAL CHIP 470K 5%   | 1/16W  |



| Ref. No.                        | Part No.   | Description                       |      |    | Remark |
|---------------------------------|--|-----------------------------------|------|----|--------|
| R480                            | 1-216-863-11   | RES-CHIP                          | 3.3M | 5% | 1/16W  |
| R482                            | 1-216-821-11   | METAL CHIP                        | 1K   | 5% | 1/16W  |
| R483                            | 1-216-821-11   | METAL CHIP                        | 1K   | 5% | 1/16W  |
| R484                            | 1-216-841-11   | METAL CHIP                        | 47K  | 5% | 1/16W  |
| R485                            | 1-216-821-11   | METAL CHIP                        | 1K   | 5% | 1/16W  |
| R486                            | 1-216-833-11   | RES-CHIP                          | 10K  | 5% | 1/16W  |
| R487                            | 1-216-864-11   | METAL CHIP                        | 0    | 5% | 1/16W  |
| R512                            | 1-216-089-11   | RES-CHIP                          | 47K  | 5% | 1/10W  |
| R513                            | 1-216-089-11   | RES-CHIP                          | 47K  | 5% | 1/10W  |
| R516                            | 1-216-833-11   | RES-CHIP                          | 10K  | 5% | 1/16W  |
| R517                            | 1-216-295-00   | SHORT                             | 0    |    |        |
| R520                            | 1-216-295-00   | SHORT                             | 0    |    |        |
| R521                            | 1-216-295-00   | SHORT                             | 0    |    |        |
| R522                            | 1-216-295-00   | SHORT                             | 0    |    |        |
| R523                            | 1-216-295-00   | SHORT                             | 0    |    |        |
| R524                            | 1-216-057-00   | METAL CHIP                        | 2.2K | 5% | 1/10W  |
| < NETWORK RESISTOR >            |  |                                   |      |    |        |
| RB400                           | 1-233-576-11   | RES, CHIP NETWORK                 | 100  |    |        |
| RB402                           | 1-233-576-11   | RES, CHIP NETWORK                 | 100  |    |        |
| RB403                           | 1-239-419-11   | NETWORK RESISTOR (CHIP)           | 470  |    |        |
| RB404                           | 1-233-576-11   | RES, CHIP NETWORK                 | 100  |    |        |
| RB405                           | 1-233-576-11   | RES, CHIP NETWORK                 | 100  |    |        |
| *****                           |  |                                   |      |    |        |
| MISCELLANEOUS                   |  |                                   |      |    |        |
| *****                           |  |                                   |      |    |        |
| 11                              | 1-790-926-21   | CORD (WITH CONNECTOR) (POWER)     |      |    |        |
| 13                              | 1-791-560-11   | CABLE, SHIELD FLEXIBLE FLAT       |      |    |        |
| 14                              | 1-792-861-11   | CABLE, FLEXIBLE FLAT              |      |    |        |
| 159                             | 1-790-418-11   | MICRO COMPUTER FLEXIBLE BOARD     |      |    |        |
| △ 207                           | 8-583-057-02   | PICK-UP, OPTICAL KMS-263A/J1N     |      |    |        |
| 210                             | 1-790-417-11   | OP FLEXIBLE BOARD                 |      |    |        |
| 219                             | 1-790-416-11   | SENSOR FLEXIBLE BOARD             |      |    |        |
| 221                             | 1-790-434-11   | OWH FLEXIBLE BOARD                |      |    |        |
| 222                             | 1-500-412-21   | HEAD, OVER WRITE (RF325-74A)      |      |    |        |
| F901                            | 1-532-877-11   | FUSE (BLADE TYPE) (AUTO FUSE) 10A |      |    |        |
| M501                            | X-3376-526-1   | MOTOR ASSY, SLED (SLED)           |      |    |        |
| M502                            | X-3376-525-1   | MOTOR ASSY, LOADING (LOADING)     |      |    |        |
| M503                            | A-3301-942-A   | MOTOR ASSY, SPINDLE (SPINDLE)     |      |    |        |
| *****                           |  |                                   |      |    |        |
| ACCESSORIES & PACKING MATERIALS |  |                                   |      |    |        |
| *****                           |  |                                   |      |    |        |
| 3-048-177-11                    | MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH)          |                                   |      |    |        |
| 3-048-178-11                    | MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH,SPANISH) |                                   |      |    |        |
| X-3378-490-1                    | CASE (PANEL) ASSY (for FRONT PANEL)                    |                                   |      |    |        |
| *****                           |  |                                   |      |    |        |

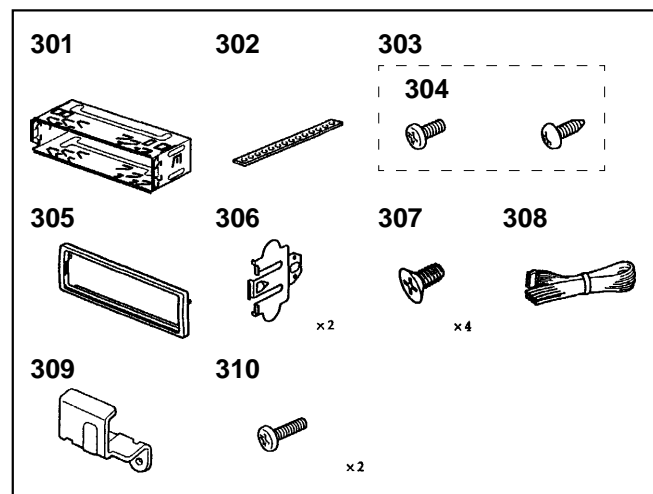
| Ref. No.      | Part No.     | Description                       | Remark |
|---------------|--------------|-----------------------------------|--------|
| *****         |              |                                   |        |
| HARDWARE LIST |              |                                   |        |
| *****         |              |                                   |        |
| #1            | 7-685-792-09 | SCREW +PTT 2.6X6 (S)              |        |
| #2            | 7-621-255-35 | SCREW +P 2X5                      |        |
| #3            | 7-621-772-20 | SCREW +B 2X5                      |        |
| #4            | 7-627-553-28 | SCREW, PRECISION +P 2X2.5         |        |
| #5            | 7-685-106-19 | SCREW +P 2X10 TYPE2 NON-SLIT      |        |
| #6            | 7-685-753-09 | SCREW +PTT 3X10 (S)               |        |
| #7            | 7-685-794-09 | SCREW +PTT 2.6X10 (S)             |        |
| #8            | 7-627-852-37 | SCREW, PRECISION +P 1.7X1.8 TYPE3 |        |
| #9            | 7-627-553-37 | SCREW, PRECISION +P 2X3 TYPE3     |        |
| #10           | 7-628-253-00 | SCREW +PS 2X4                     |        |
| #11           | 7-621-555-10 | SCREW +K 2X3                      |        |

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#### PARTS FOR INSTALLATION AND CONNECTIONS

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|     |              |                               |
|-----|--------------|-------------------------------|
| 301 | X-3373-602-1 | FRAME ASSY                    |
| 302 | 3-924-961-01 | SUPPORT (ND), FITTING         |
| 303 | X-3368-725-1 | SCREW ASSY, FITTING           |
| 304 | 7-682-160-01 | SCREW +P 4X6                  |
| 305 | 3-040-979-02 | COLLAR                        |
| 306 | 3-027-138-01 | SPRING, FITTING               |
| 307 | 3-934-325-01 | SCREW, +K (5X8) TAPPING       |
| 308 | 1-790-926-21 | CORD (WITH CONNECTOR) (POWER) |
| 309 | X-3379-045-1 | BRACKET (OPT) ASSY            |
| 310 | 7-621-284-20 | SCREW +P 2.6X6                |



The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



